



CITY OF CASA GRANDE

WASTEWATER RATE STUDY

July 2009

Prepared by:

economists.com



CITY OF CASA GRANDE, ARIZONA WASTEWATER RATE STUDY TABLE OF CONTENTS

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Appendix A – Wastewater Rate Model

Acknowledgements

During the course of this rate study, several City employees expended considerable time and effort in assisting the project team. These employees included the Mayor and Council, Mr. Jim Thompson, Ms. Diane Archer, Jerry Anglin, Mr. Larry Rains and Mr. Kevin Louis. The project team owes a debt of gratitude to the hard work, dedication and professionalism of these individuals, without whom this project would not have been successfully completed.

The project team has relied upon the extensive data supplied by the City and Arizona Water Company. Thus, the integrity of the study is largely dependent upon the accuracy of this financial and volumetric data. Every effort has been made by the project team to validate and confirm the information contained herein prior to the preparation of the final study documents. This report presents no assurance or guarantee that the forecast contained herein will be consistent with actual results or performances. These represent forecasts based on a series of assumptions about future behavior, and are not guarantees. Any changes in assumptions or actual events may result in significant revisions to the forecast and its conclusions. The cash flow projections and debt service coverage calculations are not intended to present overall financial positions, results of operations, and/or cash flows for the periods indicated, in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants.

Executive Summary



Background

In March 2009, the City of Casa Grande, Arizona (the "City") engaged **Economists.com** to conduct a wastewater rate study and long-term financial plan. The City identified numerous objectives for this study, including but not limited to the following:

- A comprehensive analysis and evaluation of the wastewater system's current cost of service and revenue requirements
- A forecast of wastewater accounts, volumes and operating and capital costs for the test year and a period ten years into the future, taking into consideration such factors as inflation, system growth, and increases in staffing levels
- A thorough review and update of the wastewater system's known capital improvement needs, as well as a determination of the need for funding capital requirements through the issuance of long-term debt
- A review of the adequacy and appropriateness of existing wastewater customer classes
- The development of a comprehensive long-term rate plan that would recover the City's cost of service, ensure equitable, just and reasonable treatment of identified customer classes, and maintain critical financial ratios

One of the critical factors driving the need for a long-term financial plan has been the City's issuance of approximately \$62.5 million in long-term debt to overhaul and expand its wastewater treatment plant. The principal and interest associated with this debt issuance has significantly increased the City's overall cost of providing wastewater service.

Wastewater Rate Comparison

Table ES-1 compares Casa Grande's monthly wastewater charges to cities primarily in southeastern Arizona. A volume of 5,000 gallons wastewater was used for the residential comparison as it represents the typical usage level for an average household.

The rate data information was obtained from municipal websites and phone interviews conducted by Economists.com. These rates do not include sales tax, activation or other charges beyond the basic minimum and volume charges. Additionally, where appropriate, certain cities that charge for service based on cubic feet of water have had their rates converted to an equivalent charge per 1,000 gallons. Based on the Water Infrastructure Finance Authority of Arizona's (WIFA) 2007 Water and Wastewater Residential Rate Survey, the City's rates are also below the state average of **\$24.27**.

TABLE ES-1

CITY OF CASA GRANDE		
Total Monthly Residential Charges for 5,000 Gallons Wastewater		
	2008 Population	5,000 Gallons Wastewater
Casa Grande	45,116	\$ 19.18
Phoenix*	1,561,485	15.22
Tucson	543,959	16.94
Yuma	93,719	28.06
Sierra Vista	45,908	14.68
San Luis	26,705	17.79
Florence	24,096	20.85
Nogales	21,709	12.55
Douglas	18,207	11.75
Eloy	16,163	30.73
Somerton	11,377	34.79
Safford	9,982	37.07
Bisbee	6,389	35.25
Benson	5,030	25.80
Willcox*	3,904	34.92
Tombstone	1,709	26.40
Patagonia	934	29.00
Johnson Utilities	na	38.50
State Average		\$ 24.27
Source: 2008 Arizona Department of Commerce Population Estimates; WW rates obtained from city websites and phone interviews conducted in April 2009		
*Winter Water Rate		

Wastewater Customers – Test Year & Ten Year Forecast

Table ES-2 details the growth projections used by the project team for the City's wastewater customers beginning in the Test Year and continuing through FY 2019. The table reveals that the wastewater customer base will remain primarily comprised of residential inside accounts during the forecast period.

TABLE ES-2

CITY OF CASA GRANDE					
FORECAST TOTAL CUSTOMERS WASTEWATER Customer Classes					
	1 Residential - Inside	2 Residential - Outside	3 Commercial	4 Industrial	Total
WASTEWATER Total Customers					
TY 2010	14	135	768	10	14,381
2011	13,618	139	777	10	14,544
2012	13,918	143	788	11	14,860
2013	14,418	151	803	11	15,383
2014	14,918	159	823	12	15,912
2015	15,418	167	848	12	16,445
2016	15,968	177	873	13	17,031
2017	16,468	189	898	13	17,568
2018	16,968	203	923	14	18,108
2019	17,468	217	948	14	18,647
WASTEWATER Annual New Customers					
TY 2010	150	4	9	-	163
2011	150	4	9	-	163
2012	300	4	11	1	316
2013	500	8	15	-	523
2014	500	8	20	1	529
2015	500	8	25	-	533
2016	550	10	25	1	586
2017	500	12	25	-	537
2018	500	14	25	1	540
2019	500	14	25	-	539

Over the last five years the City averaged about 600 new accounts per year. However, the last 6 months the City has seen only about 5 new wastewater accounts per month. This is attributed to the recent national economic downturn that has affected most cities. The City anticipates an increased level of annual wastewater account growth beginning in FY 2013. It should be noted that the highly conservative growth rate in the next few years could be exceeded if the current economic downturn ends sooner than expected.

Capital Improvement Plan

Like most cities, Casa Grande maintains an extensive and detailed capital improvement program to repair, maintain and expand its wastewater collection and treatment system. Minor capital improvements are contained in the City's budget. Major capital improvements are funded through debt issued by the City and development impact fees.

City staff and the project team developed the City's forecast capital improvements needs over the next decade. The City is forecast to spend **\$134,916,000** in total wastewater capital improvements in the next decade. However, this total includes **\$69,344,000** in projects related to the wastewater treatment plant expansion that has already been funded by the debt service outlined in the previous section. The remaining unfunded portion

of the CIP is summarized in **Table ES-3**. The most significant portion of the remaining unfunded CIP is related to the East Side sewer construction project, which is currently scheduled to be implemented in FY 2018.

TABLE ES-3

CITY OF CASA GRANDE				
WASTEWATER UNFUNDED CAPITAL IMPROVEMENT PLAN				
SCENARIO:	Alternative 1			
	Total	Years 1-5	Years 6-10	
WW Unfunded CIP	\$ 65,572,000	\$ 20,288,000	\$ 45,284,000	
Percent of WW Unfunded CIP	100.0%	30.9%	69.1%	

The City's unfunded portion of their CIP is forecast to be funded through a combination of development fees, remaining sewer capacity funds and other non-rate revenues. The difference between the amount required by the City to fund the CIP and the amount provided by the financing tools described above must be financed through the issuance of long-term debt. The debt forecast to be issued by the City is shown in **Table ES-4**. The City is forecast to issue approximately **\$53,000,000** in long-term debt to finance its wastewater capital improvement plan. All new debt is assumed to be over a 25 year term at a 4.0% interest rate with 2.0% issuing costs and a five year reserve requirement.

TABLE ES-4

CITY OF CASA GRANDE		
FORECAST BOND ISSUES		
SCENARIO:	ALT 1	
FY	Wastewater	
2010	\$	-
2011		-
2012		12,000,000
2013		-
2014		-
2015		-
2016		-
2017		-
2018		41,000,000
2019		-
Total Bonds	\$	53,000,000

Non-Rate Revenues

Although sales revenues constitute the majority of the revenue received by the City for wastewater service, the City is relying on accruing a significant amount of revenue from non-rate sources. These revenues include other general revenues, funds with current balances that have been reserved, surcharges, development charges, and service revenues.

These additional revenue sources will be central to enabling the City to fund its significant debt service requirements and to minimize the need for future rate adjustments. These non-rate revenues are subtracted from the overall budget to determine the revenue requirement to be raised from rates. The City's top revenue producing non-rate revenue sources are as follows:

- **Sewer Capacity Fund – 521** – This represents previous sewer capacity fees that the City had collected prior to the implementation of sewer impact fees. Once impact fees were adopted, the City stopped collecting these fees. The current fund balance is \$1,484,331. Fund 521 is assumed to be 100% allocated to treatment expenses in 2010.
- **WWTP Expansion Fund – 522** – This represents the 0.3% sales tax that had been collected for the purposes of funding the wastewater treatment plant expansion. The wastewater fund no longer receives this subsidy. The current fund balance is \$12,702,679. The remaining fund balance is assumed to be amortized over 5 years.
- **Sewer Development Fees – 523** – This fund currently contains \$17.9 million for collection and treatment. The City has calculated that \$11.0 million of this total is for treatment and \$6.9 million is for collection. Only the treatment debt service can be used to underwrite the debt service for the wastewater treatment plant. The collections portion will be used for future collection related capital improvement projects. Based on the current balance of \$11.0 million in treatment-related development fees, and the forecast of additional development fees accrued during the forecast period from new connections, the project team estimates that the City will be able to fund \$2.5 million per year in debt service from development fees.

Forecast non-rate revenues are presented in **Table ES-5**.

TABLE ES-5

THE CITY OF CASA GRANDE						
FORECAST NON-RATE REVENUES						
SCENARIO:	ALT 1					
	521 Sewer Capacity Fund	522 WWTP Exp. Fund	523 Development Fees	Other Non-Rate Revenue	TOTAL	
2010	\$ 1,484,331	\$ 2,540,536	\$ 2,500,000	\$ 376,000	\$ 6,900,867	
2011	-	2,540,536	2,500,000	427,473	5,468,009	
2012	-	2,540,536	2,500,000	430,330	5,470,866	
2013	-	2,540,536	2,500,000	435,058	5,475,594	
2014	-	2,540,536	2,500,000	439,840	5,480,376	
2015	-	-	2,500,000	444,658	2,944,658	
2016	-	-	2,500,000	449,955	2,949,955	
2017	-	-	2,500,000	454,810	2,954,810	
2018	-	-	2,500,000	459,691	2,959,691	
2019	-	-	2,500,000	464,563	2,964,563	

Test Year and Forecast Net Revenue Requirement

Table ES-6 presents the test year and ten year forecast for the City's net revenue requirement to be raised from rates. As the table reveals, debt service is the most significant portion of the total revenue requirement. Detailed calculations are presented in the rate model contained in Appendix A of this report.

TABLE ES-6

CITY OF CASA GRANDE							
CURRENT AND FORECAST REVENUE REQUIREMENT							
SCENARIO:	ALT 1						
	Operating Expenses	Current Debt Service	Future Debt Service	Operating Transfers	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
	WASTEWATER Revenue Requirement						
2010	\$ 2,440,500	\$ 6,312,380	\$ -	\$ 325,670	\$ 9,078,550	\$ 6,900,867	\$ 2,177,683
2011	2,868,276	6,781,497	-	339,131	9,988,904	5,468,009	4,520,895
2012	3,071,124	6,782,587	-	356,674	10,210,384	5,470,866	4,739,518
2013	3,291,124	6,782,817	943,092	379,927	11,396,960	5,475,594	5,921,366
2014	3,547,420	6,780,612	943,092	404,390	11,675,514	5,480,376	6,195,138
2015	3,810,733	5,850,943	943,092	430,068	11,034,835	2,944,658	8,090,177
2016	4,118,096	5,846,534	943,092	458,295	11,366,016	2,949,955	8,416,061
2017	4,427,699	6,240,754	943,092	486,494	12,098,038	2,954,810	9,143,229
2018	4,783,716	6,521,632	785,910	516,042	12,607,300	2,959,691	9,647,609
2019	5,147,743	6,522,321	4,008,140	546,884	16,225,088	2,964,563	13,260,525

Rate Recommendation

Table ES-7 presents the set of recommended wastewater rates referred to as "Alternative 1". In this alternative, the City's flat-rate treatment and collection residential wastewater monthly charges are continued. However, the project team recommends implementing a uniform commercial customer base charge and usage charge based on the monthly water usage data provided by Arizona Water Company. In addition, the implementation of a uniform usage charge for industrial customers is also recommended. Importantly, debt service required to fund the wastewater treatment plant expansion is paid for through monthly wastewater rates. The table presents the recommended rate design for the ten year forecast period.

The following is notable about this proposed rate design:

- The rate design assumes that the City chooses to fund all debt service through monthly wastewater rates, impact fees and current Fund Balances in accounts 521, 522 and 523.
- The rate design assumes that the City will begin using non-rate revenues from Funds 521, 522 and 523 to support the rate plan.
- Because of the more significant needs of the wastewater treatment portion of the City's capital improvement plan, the rate design presents higher annual increases for wastewater treatment charges and lower annual increases for wastewater collection charges.
- The rate design ensures that wastewater rates will recover the wastewater cost of service.

- The rate design assumes that the residential vacancy credit will be terminated.
- The project team recommends that the 10 largest Significant Industrial Users (SIU) currently classified as commercial customers be re-classified as industrial customers.
- Industrial customers should be individually metered and Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) testing should be implemented.
- Rate changes are recommended to be implemented in July of each year.

TABLE ES-7

CITY OF CASA GRANDE											
	Current	ALTERNATIVE 1 – ANNUAL RATE ADJUSTMENTS									
		Effective Oct-09	Effective Jul-10	Effective Jul-11	Effective Jul-12	Effective Jul-13	Effective Jul-14	Effective Jul-15	Effective Jul-16	Effective Jul-17	Effective Jul-18
Wastewater Rates											
Percent Adjustment by Acct Type											
Residential - IN											
Collection		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Treatment		10.00%	10.00%	10.00%	10.00%	10.00%	15.00%	5.00%	5.00%	5.00%	20.00%
Residential - OUT											
Collection		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Treatment		10.00%	10.00%	10.00%	10.00%	10.00%	15.00%	5.00%	5.00%	5.00%	20.00%
Commercial		10.00%	10.00%	10.00%	10.00%	10.00%	25.00%	5.00%	5.00%	5.00%	20.00%
Industrial		10.00%	10.00%	10.00%	10.00%	10.00%	25.00%	5.00%	5.00%	5.00%	20.00%
Residential IN Base Charges											
Base Charge - Collection	\$ 7.50	\$ 7.73	\$ 7.95	\$ 8.20	\$ 8.44	\$ 8.69	\$ 8.96	\$ 9.22	\$ 9.50	\$ 9.79	\$ 10.08
Base Charge - Treatment	11.68	12.85	14.13	15.55	17.10	18.81	21.63	22.71	23.85	25.04	30.05
Residential OUT Base Charges											
Base Charge - Collection	\$ 11.25	\$ 11.59	\$ 11.94	\$ 12.29	\$ 12.66	\$ 13.04	\$ 13.43	\$ 13.84	\$ 14.25	\$ 14.68	\$ 15.12
Base Charge - Treatment	17.52	19.27	21.20	23.32	25.65	28.22	32.45	34.07	35.77	37.56	45.08
Commercial Base Charges											
Base Charge	\$ 8.75	\$ 9.63	\$ 10.59	\$ 11.65	\$ 12.81	\$ 14.09	\$ 17.61	\$ 18.50	\$ 19.42	\$ 20.39	\$ 24.47
Usage Charge (per 1,000 gal)	1.50	1.65	1.82	2.00	2.20	2.42	3.02	3.17	3.33	3.50	4.19
Industrial Base Charges											
Base Charges	\$ 14.58	\$ 16.04	\$ 17.64	\$ 19.41	\$ 21.35	\$ 23.48	\$ 29.35	\$ 30.82	\$ 32.36	\$ 33.98	\$ 40.77
Usage Charges (per 1,000 gal)	1.35	1.49	1.63	1.80	1.98	2.17	2.72	2.85	3.00	3.15	3.78

Table ES-8 calculates the average impact on monthly wastewater bills of the proposed rate design on customers at various usage levels.

TABLE ES-8

CITY OF CASA GRANDE											
ALTERNATIVE 1 – IMPACT OF RATE PLAN ON MONTHLY CHARGES											
	Current	Effective Oct-09	Effective Jul-10	Effective Jul-11	Effective Jul-12	Effective Jul-13	Effective Jul-14	Effective Jul-15	Effective Jul-16	Effective Jul-17	Effective Jul-18
Residential-IN Monthly Wastewater Charges											
Base Charge - Collection	\$ 7.50	\$ 7.73	\$ 7.96	\$ 8.20	\$ 8.44	\$ 8.69	\$ 8.96	\$ 9.22	\$ 9.50	\$ 9.79	\$ 10.08
Base Charge - Treatment	11.68	12.85	14.13	15.55	17.10	18.81	21.63	22.71	23.85	25.04	30.05
Base Charge - TOTAL	\$ 19.18	\$ 20.57	\$ 22.09	\$ 23.74	\$ 25.54	\$ 27.51	\$ 30.59	\$ 31.94	\$ 33.35	\$ 34.83	\$ 40.13
Increase		1.39	1.52	1.65	1.80	1.96	3.08	1.35	1.41	1.48	5.30
Residential-OUT Monthly Wastewater Charges											
Base Charge - Collection	\$ 11.25	\$ 11.59	\$ 11.94	\$ 12.29	\$ 12.66	\$ 13.04	\$ 13.43	\$ 13.84	\$ 14.25	\$ 14.68	\$ 15.12
Base Charge - Treatment	17.52	19.27	21.20	23.32	25.65	28.22	32.45	34.07	35.77	37.56	45.08
Base Charge - TOTAL	\$ 28.77	\$ 30.86	\$ 33.13	\$ 35.61	\$ 38.31	\$ 41.26	\$ 45.88	\$ 47.91	\$ 50.03	\$ 52.24	\$ 60.19
Increase		2.09	2.27	2.48	2.70	2.94	4.62	2.03	2.12	2.22	7.95
Commercial Wastewater Charges											
Base Charge	\$ 8.75	\$ 9.63	\$ 10.59	\$ 11.65	\$ 12.81	\$ 14.09	\$ 17.61	\$ 18.50	\$ 19.42	\$ 20.39	\$ 24.47
Usage Charge (per 1,000 gal)	1.50	1.65	1.82	2.00	2.20	2.42	3.02	3.17	3.33	3.50	4.19
TOTAL Charge - 50,000 Gals	\$ 83.75	\$ 92.13	\$ 101.34	\$ 111.47	\$ 122.62	\$ 134.88	\$ 168.60	\$ 177.03	\$ 185.88	\$ 195.18	\$ 234.21
Increase		8.38	9.21	10.13	11.15	12.26	33.72	8.43	8.85	9.29	39.04
Industrial Wastewater Charges											
Base Charge	\$ 14.58	\$ 16.04	\$ 17.64	\$ 19.41	\$ 21.35	\$ 23.48	\$ 29.35	\$ 30.82	\$ 32.36	\$ 33.98	\$ 40.77
Usage Charge (per 1,000 gal)	1.35	1.49	1.63	1.80	1.98	2.17	2.72	2.85	3.00	3.15	3.78
TOTAL Charge - 50,000 Gals	\$ 82.09	\$ 90.29	\$ 99.32	\$ 109.25	\$ 120.17	\$ 132.19	\$ 165.24	\$ 173.50	\$ 182.18	\$ 191.28	\$ 229.54
Increase		8.21	9.03	9.93	10.92	12.02	33.05	8.26	8.68	9.11	38.26

Section I

SECTION I

Introduction and Demographic Profile



Background

In March 2009, the City of Casa Grande, Arizona (the "City") engaged **Economists.com** to conduct a wastewater rate study and long-term financial plan.

The City identified numerous objectives for this study, including but not limited to the following:

- A comprehensive analysis and evaluation of the wastewater system's current cost of service and revenue requirements
- A forecast of wastewater operating and capital costs for the test year and a period ten years into the future
- An estimate of accounts, volumes and billing units for the current year and the ten year forecast period
- A forecast of operating expenses over the next decade, taking into consideration such factors as inflation, system growth, and increases in staffing levels
- A thorough review and update of the wastewater system's known capital improvement needs, as well as a determination of the need for funding capital requirements through the issuance of long-term debt
- A review of the adequacy and appropriateness of existing wastewater customer classes
- An evaluation of the current wastewater rate structure and revenue recovered versus the revenue requirement, both overall and for each customer class
- The development of alternative rate structures that would recover the City's cost of service, ensure equitable, just and reasonable treatment of identified customer classes, and maintain critical financial ratios

One of the critical factors driving the need for a long-term financial plan has been the City's issuance of approximately \$62.5 million in long-term debt to overhaul and expand its wastewater treatment plant. The annual principal and interest associated with this debt issuance has significantly increased the City's overall cost of providing wastewater service.

In conjunction with City staff, the project team evaluated several alternative rate structures which would enable the City to achieve these objectives while continuing to provide ratepayers with superior wastewater service.

After a series of meetings with City, the project team narrowed its recommendations to the rate plan contained in this study. The analysis and recommendations presented in this study achieve all of the objectives outlined above.

Report Organization

This report is organized into the following sections:

Section I – Introduction and Demographic Profile - outlines the background, objectives and scope of this rate study and long-term financial plan. Also presents the City's current wastewater rate structure and demographic profile. This includes a comparison of the City's wastewater charges with other Arizona cities.

Section II –Wastewater Test Year and Forecast Volumes – analyzes the City's customer base, total accounts for wastewater and current water volumes based on data provided by Arizona Water Company. This section presents totals for the current year and a forecast ten years into the future.

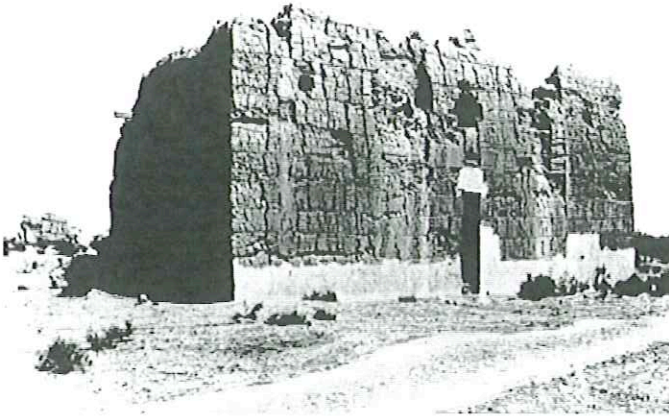
Section III –Wastewater Test Year and Forecast Revenue Requirement – outlines the process of analyzing the City's current wastewater utility cost structure. The total current or "test year" revenue requirements are developed, and costs are functionalized into treatment, collection and customer billing. Using the test year as a basis, costs are forecast for a ten year period.

Section IV –Wastewater Rate Design – Presents a rate design recommendation for the City to consider which would enable it to meet its revenue requirements over the next decade. Also presents an analysis of the impact of this rate alternative on each defined customer class.

Appendix A – presents a hard copy printout of the interactive Microsoft Excel spreadsheet model developed for the City to calculate wastewater current and future revenue requirements. The model automatically generates all calculations based on a set of defined user inputs. An electronic copy of this model will be provided to the City so that staff may use it as a tool for future rate development.



City Background



Casa Grande is centrally located between Phoenix and Tucson in the center of the Metropolitan Corridor. Incorporated in 1915, the City has grown to be the second largest community in Pinal County, with its population more than doubling since 1990. However, like many cities throughout the country, growth has moderated recently due to the economic slowdown. The project team has assumed a very conservative growth rate for purposes of this study.

Founded in 1879 during the Arizona mining boom, Casa Grande (meaning “large house”)

was named for the famous Hohokam Indian ruins 20 miles to the northeast. The community traces its beginning to the summer of 1879, when Southern Pacific Railroad stopped working on the rail line it was building from Yuma across Arizona due to the hot weather. The construction crews, who were from Yuma, stocked supplies and established a small community by the time construction resumed in January 1880. In September 1880, a construction boss, his family and 300 laborers arrived and began working on a rail line to Tucson. They named the settlement Casa Grande and the town boomed as a railhead to mines.

Though Casa Grande was decimated by fire in both 1886 and 1893, the community rallied to rebuild and forge ahead. The persevering residents helped the city survive through the mining slump of the 1890's by shifting their focus away from mining toward agriculture, a key step to saving the community from becoming another southwestern mining ghost town. Today, Casa Grande is bustling with downtown retailers, a regional shopping mall, factory outlet merchants, agribusiness leaders, government employees, miners and industry workers.

Residents and visitors can enjoy the amenities of a big city with the easy-going atmosphere of a small town and the natural beauty of the low desert and mountains serving as a backdrop. Along with a wide selection of shopping and dining venues, visitors can enjoy cultural attractions, such as the Casa Grande Art Museum, the Casa Grande Valley Players and the annual O'Odham Tash Celebration. For the past 50 years, the Arizona Antique Aircraft Association has hosted the Casa Grande Cactus Fly-In. The event focuses on aircraft and the people that restore, build, maintain, fly and talk about aircraft. The Cactus Fly-In is a fun and well attended community event.

City Leadership

The City operates under a Council-Manager form of government. The Council consists of the Mayor, the Mayor ProTempore and five council members. The City Manager reports to the Mayor, Council and the citizens of Casa Grande, and is responsible for the day-to-day operations of the City. All changes to the City's wastewater structure must be approved by a vote of the Council. **Table I-1** lists current serving City officials.

The City utilizes standard governmental accounting procedures for its general and enterprise funds. The Fiscal Year begins on July 1st and ends on the following June 30th.

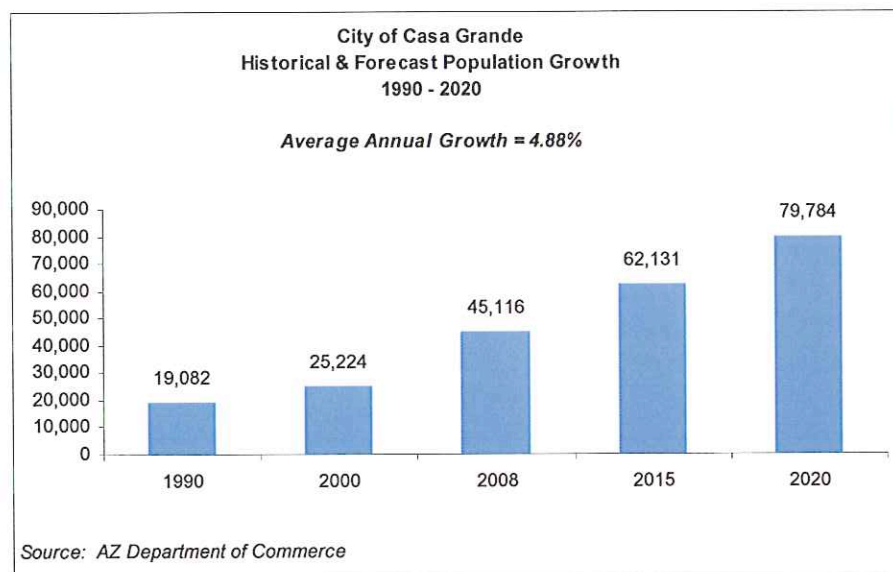
TABLE I-1

CITY OF CASA GRANDE			
CITY OFFICIALS -- JULY 2009			
Mayor and Council		Senior City Staff	
Bob Jackson	<i>Mayor</i>	Jim Thompson	<i>City Manager</i>
Dick Powell	<i>Mayor Pro Tempore</i>	Larry Rains	<i>Deputy City Manager</i>
Ralph Varela	<i>Council Member</i>	Diane Archer	<i>Finance Director</i>
Steve Miller	<i>Council Member</i>	Kevin Louis	<i>Public Works Director</i>
Karl Montoya	<i>Council Member</i>	Jerry Anglin	<i>Wastewater Superintendent</i>
Mary Kortsen	<i>Council Member</i>	Robert Huddleston	<i>Chief of Police</i>
Matt Herman	<i>Council Member</i>	Scott Miller	<i>Fire Chief</i>

Population – Current and Projected

The state of Arizona has experienced tremendous population growth in the past twenty years. Through the 1990's, the population of Casa Grande more than doubled, growing by approximately 236%. The City's population increased from 19,082 in 1990 to **45,116** in 2008 according to the US Census Bureau and the Arizona Department of Commerce. As will be described in more detail in Section II of this study, due to the sudden and severe economic downturn in 2008 – 2009, a very conservative growth rate has been assumed for terms of adding additional accounts. **Chart I-2** summarizes recent historical as well as projected growth according to the Arizona Department of Commerce for the City of Casa Grande.

CHART I-2



Wastewater Current Rates

Table I-3 summarizes the City's current wastewater rate structure.

TABLE I-3

CITY OF CASA GRANDE			
Current Monthly Wastewater Rates			
	Inside City	Outside City	
Residential			
Base Charge - Collection	\$ 7.50	\$ 11.25	
Base Charge - Treatment	11.68	17.52	
Usage Charge	na	na	
Commercial			
Avg Base Charge	\$ 8.75	na	
Avg Usage Charge (per 1,000 gal)	1.50	na	
Industrial			
Default Base Charge	\$ 14.58	na	
Usage Charge (per 1,000 gal)	*	na	
* Individual usage charge based on flow and strength estimates developed by City staff			

The current wastewater rate structure, implemented in January 2009, has two components for residential customer: treatment and collection. Prior to the 2009 rate increase, the last rate change for residential and commercial customers was in January 2005 and was less than \$2.00 per customer. The City charges residential customers a base monthly collection and treatment charge based on whether the customer resides inside or outside city limits. Residential customers are not charged a usage charge. For residential users, the collection portion of the base monthly charge is subject to a vacancy credit if requested by the customer.

Commercial customers pay base and usage charges based on their commercial classification and estimated usage. City staff has followed a policy of charging commercial customers based on usage and strength estimates for each individual customer.

Industrial customers also pay a base charge and usage charges based on flow and strength estimates developed by City staff for each individual customer. Hexcel is currently the only customer classified as industrial.

Wastewater Rate Comparison

Table I-4 compares Casa Grande's monthly residential wastewater charges to cities primarily in southeastern Arizona. A volume of 5,000 gallons was used for the residential comparison as it represents the typical usage level for an average household.

The rate data information was obtained from municipal websites and phone interviews conducted by Economists.com in April 2009. These rates do not include sales tax, activation or other charges beyond the basic minimum and volume charges. Additionally, where appropriate, certain cities that charge for service based on cubic feet of water have had their rates converted to an equivalent charge per 1,000 gallons. Based on the Water Infrastructure Finance Authority of Arizona's (WIFA) 2007 Water and Wastewater Residential Rate Survey, the City's rates are below the state average of **\$24.27**.

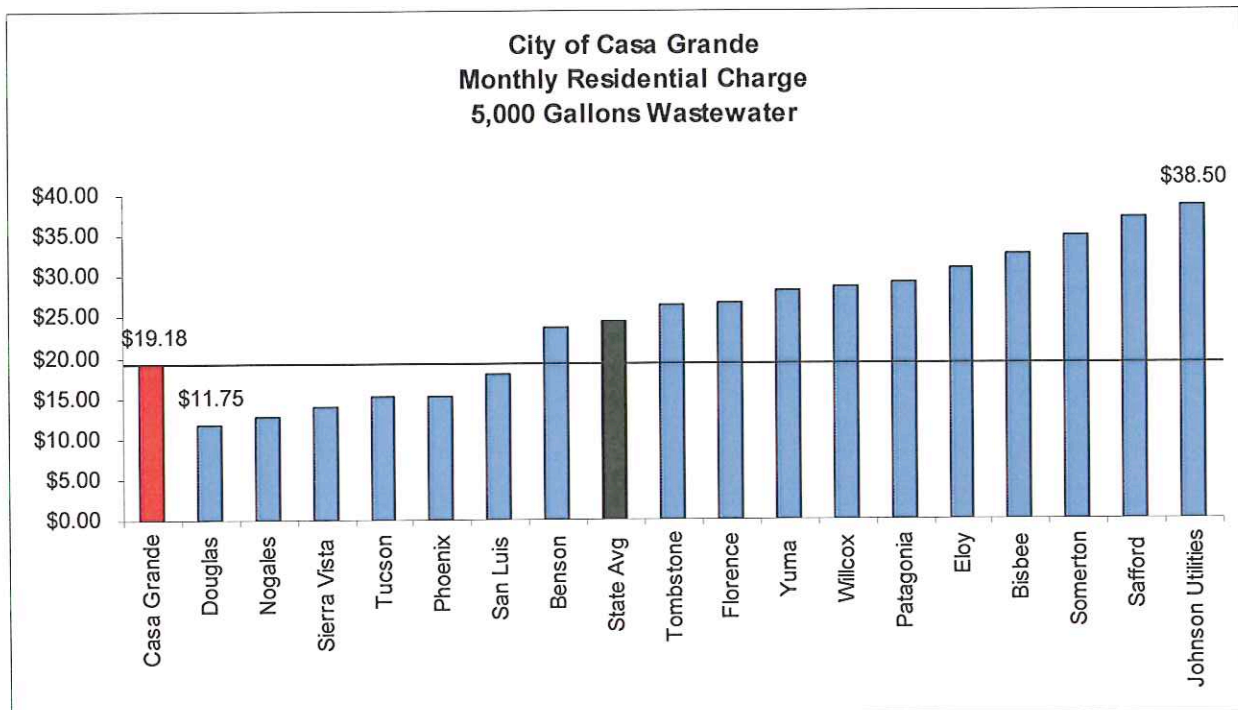
TABLE I-4

CITY OF CASA GRANDE		
Total Monthly Residential Charges for 5,000 Gallons Wastewater		
	2008 Population	5,000 Gallons Wastewater
Casa Grande	45,116	\$ 19.18
Phoenix*	1,561,485	15.22
Tucson	543,959	16.94
Yuma	93,719	28.06
Sierra Vista	45,908	14.68
San Luis	26,705	17.79
Florence	24,096	20.85
Nogales	21,709	12.55
Douglas	18,207	11.75
Eloy	16,163	30.73
Somerton	11,377	34.79
Safford	9,982	37.07
Bisbee	6,389	35.25
Benson	5,030	25.80
Willcox*	3,904	34.92
Tombstone	1,709	26.40
Patagonia	934	29.00
Johnson Utilities	na	38.50
State Average		\$ 24.27
Source: 2008 Arizona Department of Commerce Population Estimates; WW rates obtained from city websites and phone interviews conducted in April 2009		
*Winter Water Rate		

Comparisons such as these are for usage charges only. This type of comparison may have the unintended effect of discriminating against communities who choose to finance system expansions through current rates or revenue bonds, which are included in rates, as opposed to those who utilize general obligation bonds, which are funded through taxes. All else being equal, a City that primarily or exclusively uses general obligation bonds will have a lower wastewater rate per 1,000 gallons but a higher tax rate.

With these caveats in mind, **Chart I-5** presents a graphic comparison of 5,000 gallons wastewater charges for residential accounts. It should be noted that for 5,000 gallons of wastewater usage, a residential ratepayer inside Casa Grande pays approximately **\$19.18**, which is 26.5% lower than the 2007 state average of \$24.27. The project team relied on the Arizona's 2007 wastewater state average for comparison purposes since WIFA has not released the results of its 2008 Water and Wastewater Residential Rate Survey. Since many Arizona cities have recently implemented wastewater rate increases, it can be assumed that the state's wastewater rate average is actually higher than \$24.27. Therefore, Casa Grande's wastewater rates will continue to be well below the state's average.

CHART I-5



Section II

SECTION II

Wastewater Test Year and Forecast Volumes



In order to accurately forecast future revenues and expenses, it is necessary to examine current wastewater utility conditions. The first step in developing cost of service rates is to analyze patterns of usage, both for the system as a whole and for specified customer classes.

Since wastewater volume is derived from water usage, water consumption records were obtained from Arizona Water Company for all months from October 2007 to the present. Arizona Water Company provides water service to Casa Grande residents and businesses. The water consumption records provided information on the monthly water

volumes distributed system-wide by account type as well as the number of accounts by meter size for each month. Monthly revenue by customer class was provided by the City.

According to standard utility ratemaking methodology, in order to allocate revenue requirements equitably among system users, customers must be classified into relatively homogeneous groups with similar usage characteristics or service demands. Costs are then allocated to the customer classes in proportion to the usage characteristics of each class. For the wastewater system, costs are allocated to customers based on their estimated wastewater flows, and in some cases, based on wastewater strengths.

After thoroughly examining volume and customer data, the project team recommends that the City classify its top ten Significant Industrial Users (SIU) customers as industrial customers rather than as commercial customers as it currently does. Currently, only Hexcel is listed as an industrial customer.

In this section the City's customer classes and test year usage patterns will be thoroughly analyzed. A ten year projection of customers and usage will also be presented. These forecasts, along with the revenue requirements, will form the basis of the rate design recommendations.

Wastewater Customers and Meters – Test Year & Ten Year Forecast

The City's wastewater customer classes are listed in **Table II-1**. The City provided the project team with wastewater account data for March 2009. The project team used this data as the basis for the test year.

TABLE II-1

CITY OF CASA GRANDE		
WASTEWATER Customers -- March 2009		
1	Residential - Inside	13,318
2	Residential - Outside	131
3	Commercial	777
4	Industrial	1
Total		14,227

Table II-2 details the growth projections used by the project team for the City's wastewater customers beginning in the Test Year and continuing through FY 2019. For the Test Year there are estimated to be 163 new wastewater accounts added. These 163 new accounts are comprised of 150 residential-in, 4 residential out and 9 commercial customers. The forecast reveals that growth is expected to remain low for the next two years, which reflects the current severe economic downturn. In FY 2012, growth rates are forecast to begin increasing with annual new accounts returning to historical levels in the latter half of the next decade. The project team considers this forecast to be reasonable and conservative.

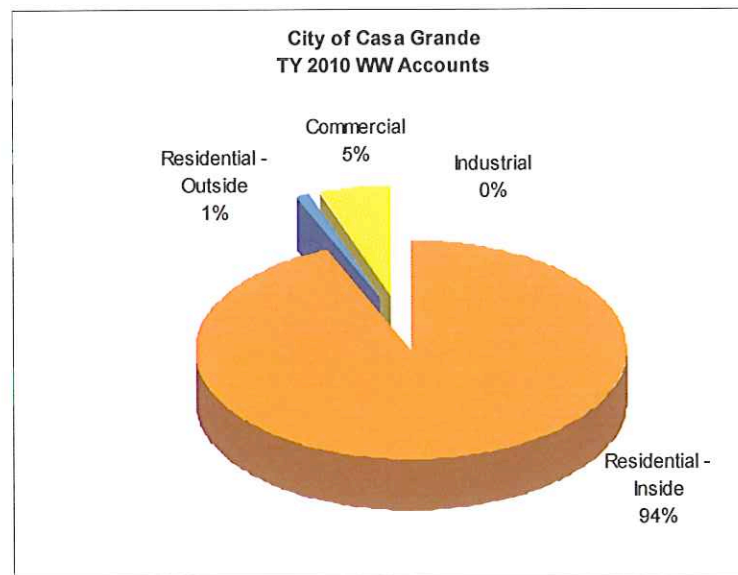


TABLE II-2

CITY OF CASA GRANDE					
FORECAST TOTAL CUSTOMERS WASTEWATER Customer Classes					
	1 Residential - Inside	2 Residential - Outside	3 Commercial	4 Industrial	Total
WASTEWATER Total Customers					
TY 2010	14	135	768	10	14,381
2011	13,618	139	777	10	14,544
2012	13,918	143	788	11	14,860
2013	14,418	151	803	11	15,383
2014	14,918	159	823	12	15,912
2015	15,418	167	848	12	16,445
2016	15,968	177	873	13	17,031
2017	16,468	189	898	13	17,568
2018	16,968	203	923	14	18,108
2019	17,468	217	948	14	18,647
WASTEWATER Annual New Customers					
TY 2010	150	4	9	-	163
2011	150	4	9	-	163
2012	300	4	11	1	316
2013	500	8	15	-	523
2014	500	8	20	1	529
2015	500	8	25	-	533
2016	550	10	25	1	586
2017	500	12	25	-	537
2018	500	14	25	1	540
2019	500	14	25	-	539

Chart II-3 reveals that the wastewater customer base is primarily comprised of residential inside accounts. The wastewater customer base is expected to remain primarily comprised of residential inside accounts during the forecast period.

CHART II-3

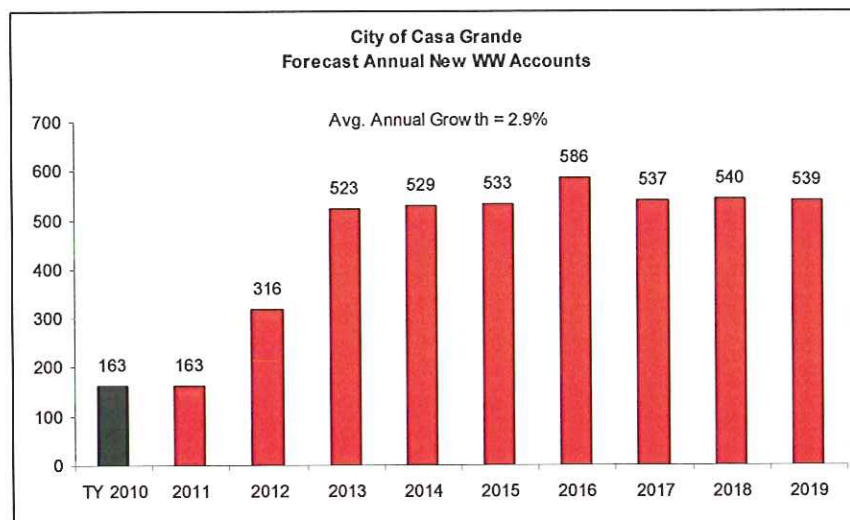


Over the last five years the City averaged about 600 new accounts per year. In contrast, the last 6 months the City has seen only about 5 new wastewater accounts per month. This is attributed to the recent national economic downturn that has affected most cities. As stated earlier, the forecast anticipates an increase in levels of annual wastewater account growth beginning in FY 2012. It should be noted that the conservative average annual growth rate of 2.9% presented in this forecast could be exceeded if the current economic downturn ends sooner than expected.

Based on building permits that have been issued by the City, there are approximately 8,000 shovel ready lots within the City limits. The infrastructure for these 8,000 lots is in place and once building begins, the number of wastewater accounts coming on-line could increase very quickly.

Wastewater account growth is further illustrated in **Chart II-4**.

CHART II-4



Wastewater Flows – Test Year and Forecast

Many cities across the country use monthly water sales as a basis for determining wastewater billing units. However, until recently, Casa Grande did not have access to water sales data because water services are provided by Arizona Water Company. Historically, only usage estimates have been used to calculate charges for all commercial customers.

In March 2008, Casa Grande entered into a franchise agreement with Arizona Water Company which created a partnership to implement a Reclaimed Water Master Plan. This agreement allows the City to obtain water customer usage information from Arizona Water Company. Going forward, Arizona Water Company will provide monthly water usage information to the City. The City will be able to use this data to calculate more accurate usage charges for their customers.

The project team prepared a ten year forecast of wastewater flows. The results of the forecast are presented in **Table II-5**. Unlike water usage, wastewater usage is not subject to significant fluctuations because water volume fluctuation is due to outdoor usage that is not returned to the wastewater system.

TABLE II-5

CITY OF CASA GRANDE					
FORECAST WASTEWATER BILLING UNITS WASTEWATER Customer Classes					
FY	1 Residential Inside	2 Residential Outside	3 Commercial	4 Industrial	Total
WASTEWATER Forecast Billing Units					
2010	1,292,928,000	12,960,000	608,355,482	234,687,924	2,148,931,406
2011	1,307,328,000	13,344,000	615,484,648	234,687,924	2,170,844,572
2012	1,336,128,000	13,728,000	624,198,072	258,156,716	2,232,210,789
2013	1,384,128,000	14,496,000	636,080,015	258,156,716	2,292,860,732
2014	1,432,128,000	15,264,000	651,922,606	281,625,509	2,380,940,115
2015	1,480,128,000	16,032,000	671,725,844	281,625,509	2,449,511,353
2016	1,532,928,000	16,992,000	691,529,083	305,094,301	2,546,543,384
2017	1,580,928,000	18,144,000	711,332,321	305,094,301	2,615,498,622
2018	1,628,928,000	19,488,000	731,135,560	328,563,094	2,708,114,653
2019	1,676,928,000	20,832,000	750,938,798	328,563,094	2,777,261,891

Wastewater Strengths – Test Year and Forecast

Part of the process of determining the wastewater cost of service by customer class is to determine the total pounds of BOD and TSS generated commercial and industrial customers. Since Abbott Laboratories is the only wastewater customer that measures BOD and TSS levels, the project team used the assumed domestic strength of 300 mg/l BOD and 300 mg/l TSS to determine the total pounds of BOD and TSS generated by each customer class. The City's ordinance indicates that all industrial customers can be required to pay a BOD surcharge. In future years, the City may want to consider testing the BOD and TSS levels of all industrial customers.

Detailed calculations for commercial and industrial strength levels are presented in **Table II-6** and in the rate model presented in Appendix A.

TABLE II-6

CITY OF CASA GRANDE					
FORECAST WASTEWATER BILLING UNITS					
WASTEWATER Commercial & Industrial Customer Classes					
FY	Total Billing Units	Total MG/L		Total Lbs	
		BOD	TSS	BOD	TSS
Commercial					
2010	608,355,482	300	300	1,522,105	1,522,105
2011	615,484,648	300	300	1,539,943	1,539,943
2012	624,198,072	300	300	1,561,744	1,561,744
2013	636,080,015	300	300	1,591,472	1,591,472
2014	651,922,606	300	300	1,631,110	1,631,110
2015	671,725,844	300	300	1,680,658	1,680,658
2016	691,529,083	300	300	1,730,206	1,730,206
2017	711,332,321	300	300	1,779,753	1,779,753
2018	731,135,560	300	300	1,829,301	1,829,301
2019	750,938,798	300	300	1,878,849	1,878,849
Industrial					
2010	234,687,924	300	300	587,189	587,189
2011	234,687,924	300	300	587,189	587,189
2012	258,156,716	300	300	645,908	645,908
2013	258,156,716	300	300	645,908	645,908
2014	281,625,509	300	300	704,627	704,627
2015	281,625,509	300	300	704,627	704,627
2016	305,094,301	300	300	763,346	763,346
2017	305,094,301	300	300	763,346	763,346
2018	328,563,094	300	300	822,065	822,065
2019	328,563,094	300	300	822,065	822,065

Section III

SECTION III

Wastewater Forecast Revenue Requirement



In this section of the wastewater rate study and long-term financial plan, the City of Casa Grande's test year and forecast wastewater utility revenue requirements are developed. As noted in Section I, the test year consists of the City's upcoming fiscal year, July 1, 2009 through June 30, 2010.

The estimates presented in this section are based on the City's Council-adopted budget for FY 2010, as well as a forecast of the City's future capital improvements.

The calculation of a revenue requirement differs from a utility's budget in that it represents only that amount that must be raised through the City's user rates. This

means that non-rate revenue (such as connection fees, late payment charges, sale of effluent and interest) must be subtracted from the budgeted operating and capital expenditures to determine the net revenue requirement to be raised from rates. It should be noted that from 1994 – 2006 wastewater operations had been subsidized by a 0.3% sales tax. In 2007, the City Council transferred the sales tax revenue from wastewater to public safety. This means that rates will have to now make up for the loss of this subsidy.

As is typical for publicly owned utilities, Casa Grande's system revenue requirements were developed using the cash basis of ratemaking. Under the cash basis, as defined by the AWWA Manual M-1, system revenue requirements consist of cash expenditures and other financial commitments (such as debt service coverage or reserves) that must be met through system operating revenues and other revenue sources.

The following specific items are included in the City's revenue requirements raised from rates:

O&M expenses

Operating Transfers

Capital Outlays Funded from Rates

Debt service -- Current

Debt Service – Forecast

The City has one wastewater treatment plant, the City of Casa Grande Water Reclamation Facility. The City is currently doubling the capacity of its wastewater treatment plant from 6 mgd to 12 mgd. The newly expanded wastewater treatment plant is expected to be online in January 2011.

All data used in the development of the revenue requirements was obtained from the financial statements, budgets and other information provided by City staff.

Operating Expenses – Test Year

Table III-1 summarizes the test year FY 2010 operating costs and fund transfers for the City.

TABLE III-1

CITY OF CASA GRANDE				
TEST YEAR OPERATING EXPENSES				
SCENARIO:	Alternative 1			
	Operating Expenses	Transfers	Total Operating/Transfers	
Wastewater Treatment	\$ 1,924,960	\$ 201,910	\$ 2,126,870	
Wastewater Collection	515,540	123,760	639,300	
TOTAL WW OPERATING EXPENSES	\$ 2,440,500	\$ 325,670	\$ 2,766,170	

As shown in Table III-1, the City's operating expenses and transfers for its wastewater utility are forecast to be **\$2,766,170** in the test year. **Table III-2** and **Table III-3** present the FY 2010 wastewater operating budget in detail separated by treatment and collection, respectively. These totals are derived from the City's FY 2010 budget. General fund transfers are presented separately because these totals are not included for the purposes of calculating debt coverage factors. Capital outlays and debt service are examined separately and in detail later in this section.

TABLE III-2

CITY OF CASA GRANDE		
TEST YEAR OPERATING EXPENSES - WW TREATMENT		
SCENARIO:	Alternative 1	Test Year FY 2010
WW TREATMENT EXPENSES		
PERSONNEL SERVICES		
520-35-451-1101-00	Permanent Wages and Salaries	\$ 484,300
520-35-451-1110-00	Overtime	5,800
520-35-451-1205-00	Social Security Taxes	37,020
520-35-451-1210-00	Pension and Retirement	45,510
520-35-451-1215-00	Employee Insurance	58,290
520-35-451-1220-00	Worker's Compensation Insurance	25,920
520-35-451-1240-00	Training	19,700
520-35-451-1245-00	Conferences	2,600
520-35-451-1520-00	Travel and Meetings	2,600
Total Personnel Services		\$ 681,740
CONTRACTUAL SERVICES		
520-35-451-2210-00	Professional Services	\$ 153,300
520-35-451-2215-00	Contractual Services	153,300
520-35-451-2220-50	Communication and Equipment Contractual	700
520-35-451-2220-70	Other Equipment	43,800
520-35-451-2225-00	City Vehicle	30,330
520-35-451-2230-00	Rentals and Leases	700
520-35-451-2230-00	Dues and Memberships	400
Total Contractual Services		\$ 422,780
OPERATING SUPPLIES		
520-35-451-3305-00	Office Supplies	\$ 7,300
520-35-451-3330-00	Chemical and Supply	200,000
520-35-451-3350-00	Clothing and Uniforms	6,200
520-35-451-3355-00	Printing and Duplication	900
520-35-451-3360-00	Maintenance Supplies	14,600
520-35-451-3360-0	Sewer Materials	13,900
520-35-451-3365-10	Gasoline	27,270
520-35-451-3365-20	Diesel	15,130
520-35-451-3365-40	Propane	600
520-35-451-3365-50	Lubricants	1,900
520-35-451-3370-00	Small Tools	5,500
520-35-451-3385-00	Postage Express & Freight	11,700
520-35-451-3390-10	Electric	500,000
520-35-451-3390-30	Water	1,600
520-35-451-3390-50	Telephone	13,840
520-35-451-4310-00	Facility Replacement	-
Total Operating Supplies		\$ 820,440
Total WW Operating Exp - TREATMENT		\$ 1,924,960

TABLE III-3

CITY OF CASA GRANDE		
TEST YEAR OPERATING EXPENSES - WW COLLECTION		
SCENARIO:	Alternative 1	Test Year FY 2010
WW COLLECTION EXPENSES		
PERSONNEL SERVICES		
520-35-451-1101-00	Permanent Wages and Salaries	\$ 116,200
520-35-451-1110-00	Overtime	2,200
520-35-451-1205-00	Social Security Taxes	8,900
520-35-451-1210-00	Pension and Retirement	10,920
520-35-451-1215-00	Employee Insurance	20,730
520-35-451-1220-00	Worker's Compensation Insurance	6,400
520-35-451-1240-00	Training	7,300
520-35-451-1245-00	Conferences	1,000
520-35-451-1520-00	Travel and Meetings	1,000
Total Personnel Services		\$ 174,650
CONTRACTUAL SERVICES		
520-35-451-2210-00	Professional Services	\$ 56,700
520-35-451-2215-00	Contractual Services	56,700
520-35-451-2220-50	Communication and Equipment Contractual	300
520-35-451-2220-70	Other Equipment	16,200
520-35-451-2225-00	City Vehicle	-
520-35-451-2230-00	Rentals and Leases	300
520-35-451-2230-00	Dues and Memberships	200
Total Contractual Services		\$ 130,400
OPERATING SUPPLIES		
520-35-451-3305-00	Office Supplies	\$ 2,700
520-35-451-3330-00	Chemical and Supply	24,300
520-35-451-3350-00	Clothing and Uniforms	2,300
520-35-451-3355-00	Printing and Duplication	300
520-35-451-3360-00	Maintenance Supplies	5,400
520-35-451-3360-0	Sewer Materials	5,100
520-35-451-3365-10	Gasoline	13,500
520-35-451-3365-20	Diesel	17,090
520-35-451-3365-40	Propane	200
520-35-451-3365-50	Lubricants	700
520-35-451-3370-00	Small Tools	2,000
520-35-451-3385-00	Postage Express & Freight	4,300
520-35-451-3390-10	Electric	128,800
520-35-451-3390-30	Water	600
520-35-451-3390-50	Telephone	3,200
520-35-451-4310-00	Facility Replacement	-
Total Operating Supplies		\$ 210,490
Total WW Operating Exp - COLLECTION		\$ 515,540

Operating Expenses and Transfers – Ten Year Forecast

Table III-4 presents the wastewater utility operating expense and transfer forecast for the ten year period FY 2010 – FY 2019. Details behind these calculations can be found in the rate model contained in Appendix A. This forecast is based on the following set of assumptions:

- Most wastewater operating expenses are expected to increase at the rate of inflation, which is assumed to be 3.0% per year.
- In addition to anticipated inflationary increases there are other factors that are taken into account when forecasting various expense items. One such factor is that certain expense categories are expected to increase at rates greater than the average inflation rate. Account growth and volume growth will also affect certain expense categories, and some of the expense items are vulnerable to a combination of these greater than average increases. Items that are considered to be affected by general inflation, premium escalation, and account growth are energy related items such as gas and electric expenses.
- Certain expenses will increase with the wastewater treatment plant expansion, volume and customer growth (i.e. electricity and chemicals).
- Certain personnel related expenses such as wages and social security taxes are projected to increase at 5.0% annually. Pension, Retirement and Insurance are projected to increase at 10% annually.
- Capital outlays are typically for minor assets such as trucks and computers, as opposed to major capital expenditures such as treatment plants. The City's capital outlays are funded through revenues generated for purposes needed to meet debt coverage.



TABLE III-4

CITY OF CASA GRANDE					
FORECAST OPERATING EXPENSES AND TRANSFERS					
	FY	Operating Expenses	Transfers	Total Operating/Transfers	
WW Treatment					
	2010	\$ 1,924,960	\$ 201,910	\$ 2,126,870	
	2011	2,321,569	210,256	2,531,825	
	2012	2,486,862	221,132	2,707,993	
	2013	2,666,114	235,548	2,901,663	
	2014	2,875,321	250,715	3,126,036	
	2015	3,090,009	266,635	3,356,644	
	2016	3,341,021	284,135	3,625,156	
	2017	3,593,488	301,618	3,895,106	
	2018	3,884,171	319,938	4,204,109	
	2019	4,181,044	339,059	4,520,103	
WW Collection					
	2010	\$ 515,540	\$ 123,760	\$ 639,300	
	2011	546,707	128,876	675,583	
	2012	584,262	135,542	719,804	
	2013	625,009	144,379	769,388	
	2014	672,099	153,675	825,774	
	2015	720,724	163,433	884,157	
	2016	777,075	174,160	951,234	
	2017	834,211	184,876	1,019,087	
	2018	899,545	196,105	1,095,650	
	2019	966,699	207,825	1,174,524	
TOTAL WW Operating Expenses & Transfers					
	2010	\$ 2,440,500	\$ 325,670	\$ 2,766,170	
	2011	2,868,276	339,131	3,207,408	
	2012	3,071,124	356,674	3,427,797	
	2013	3,291,124	379,927	3,671,051	
	2014	3,547,420	404,390	3,951,810	
	2015	3,810,733	430,068	4,240,800	
	2016	4,118,096	458,295	4,576,391	
	2017	4,427,699	486,494	4,914,193	
	2018	4,783,716	516,042	5,299,759	
	2019	5,147,743	546,884	5,694,627	

Existing Debt Service

Due to the needs of the City's comprehensive wastewater treatment plant expansion project, the City has significantly increased its annual debt service requirements in recent years. The City now maintains three outstanding loans related to the wastewater treatment plant expansion project. In January 2009, the City issued a \$37,555,540 WIFA loan tied to the Excise Tax Pledge and a \$25,000,000 WIFA loan tied to the System Revenue Pledge. These loans will cover 2 years of CIP expenses including expansion of the wastewater treatment plant and associated costs. The third outstanding loan, the 2003 wastewater treatment plant expansion loan, has a remaining principal balance of \$13,304,502 as of the beginning of FY 2010.

Table III-5 presents forecast debt service for the debt currently outstanding.

TABLE III-5

CITY OF CASA GRANDE				
EXISTING WASTEWATER DEBT SERVICE				
SCENARIO:	Alternative 1			
	2003 WWTP Expansion	WIFA Excise Tax	WIFA System Revenue	Total Existing Debt Service
2010	\$ 1,171,833	\$ 3,580,992	\$ 1,559,554	\$ 6,312,380
2011	1,167,104	3,324,604	2,289,789	6,781,497
2012	1,168,194	3,324,604	2,289,789	6,782,587
2013	1,168,424	3,324,604	2,289,789	6,782,817
2014	1,166,219	3,324,604	2,289,789	6,780,612
2015	1,172,282	2,770,503	1,908,157	5,850,943
2016	1,167,873	2,770,503	1,908,157	5,846,534
2017	1,562,093	2,770,503	1,908,157	6,240,754
2018	1,842,971	2,770,503	1,908,157	6,521,632
2019	1,843,660	2,770,503	1,908,157	6,522,321

Capital Improvement Plan

Like most cities, Casa Grande maintains an extensive and detailed capital improvement program to repair, maintain and expand its wastewater collection and treatment system. Minor capital improvements are contained in the City's budget. Major capital improvements are funded through debt issued by the City and development impact fees.

City staff and the project team developed the City's forecast capital improvements needs over the next decade. The City is forecast to spend **\$134,916,000** in total wastewater capital improvements in the next decade. However, this total includes **\$69,344,000** in projects related to the wastewater treatment plant expansion that has already been funded by the debt service outlined in the previous section. The remaining unfunded portion of the CIP is summarized in **Table III-6** and **Chart III-7** and presented in detail in **Table III-8**. The charts reveal that the most significant portion of the remaining unfunded CIP is related to the East Side sewer construction project, which is currently scheduled to be implemented in FY 2018.

TABLE III-6

CITY OF CASA GRANDE				
WASTEWATER UNFUNDED CAPITAL IMPROVEMENT PLAN				
SCENARIO:	Alternative 1			
	Total	Years 1-5	Years 6-10	
WW Unfunded CIP	\$ 65,572,000	\$ 20,288,000	\$ 45,284,000	
Percent of WW Unfunded CIP	100.0%	30.9%	69.1%	

CHART III-7

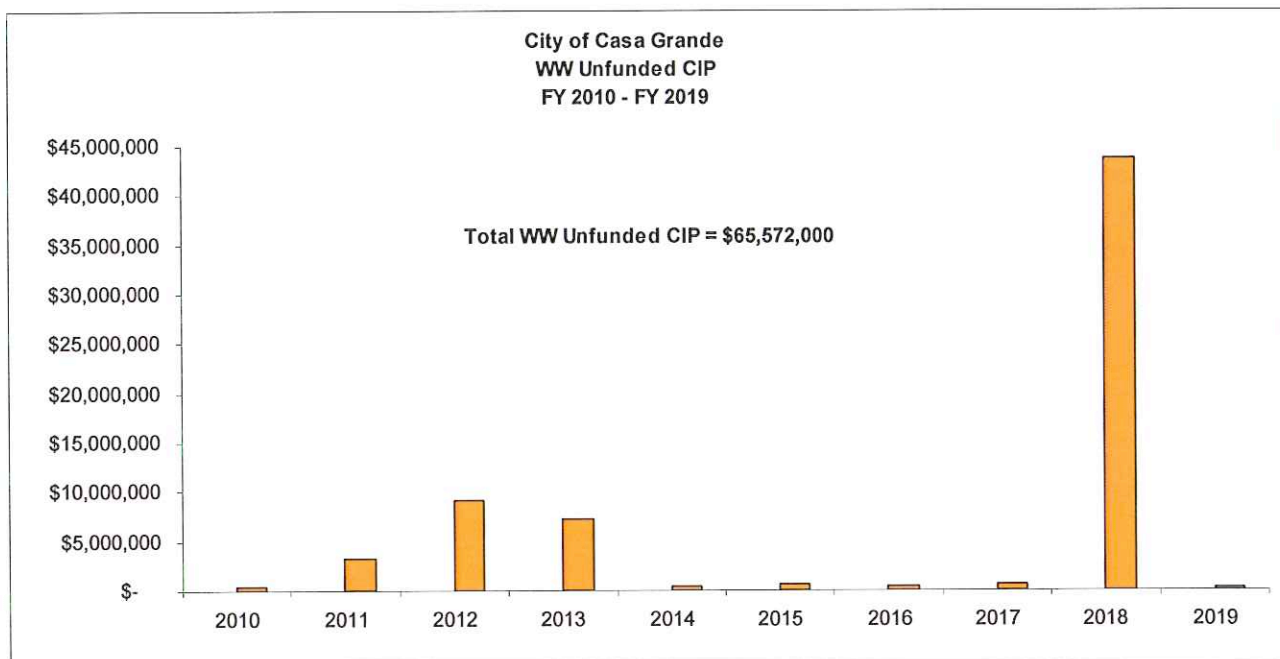


Table III-8

CITY OF CASA GRANDE											
WASTEWATER UNFUNDED CAPITAL IMPROVEMENT PLAN FY 2010 - FY 2019											
10 Year Forecast Alternative 1	Total Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Scenario: Alternative 1											
Wastewater Unfunded CIP											
2559 Managed Recharge Facility	\$ 700,000		\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2650 Monitor wells at Santa Cruz Channel	-	-	-	-	-	-	-	-	-	-	-
2586 UPRR Crossing Upgrade	-	-	-	-	-	-	-	-	-	-	-
1917 Effluent Pump Rehabilitation	95,000	-	30,000	30,000	35,000	-	-	-	-	-	-
2409 Lift Station Rehab	120,000	-	40,000	40,000	40,000	-	-	-	-	-	-
2637 Water Truck	-	-	-	-	-	-	-	-	-	-	-
2465 Water Reclamation Facility Expansion	-	-	-	-	-	-	-	-	-	-	-
2466 Burns Road Sewer Construction	-	-	-	-	-	-	-	-	-	-	-
2467 East Side Sewer Expansion Group Upsize	-	-	-	-	-	-	-	-	-	-	-
2468 Kortsen Road Sewer Design and Construction	-	-	-	-	-	-	-	-	-	-	-
2410 Effluent Pump Rehabilitation	100,000	-	30,000	35,000	35,000	-	-	-	-	-	-
2470 Land acquisition	-	-	-	-	-	-	-	-	-	-	-
2587 Manhole Rehabilitation	2,275,000	250,000	250,000	25,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
2674 Replacement Service Truck	95,000	95,000	-	-	-	-	-	-	-	-	-
2685 4X4 Pickup Truck	28,000	-	-	-	-	28,000	-	-	-	-	-
1977 East Side Sewer Construction	43,000,000	-	-	-	-	-	-	-	-	43,000,000	-
2681 Pickup Trucks (3)	57,000	-	-	-	-	-	57,000	-	-	-	-
2682 Pickup Trucks (3)	67,000	-	-	-	-	-	-	-	-	67,000	-
2691 Backhoe	69,000	-	-	-	-	-	-	-	69,000	-	-
2686 Combination Truck	220,000	-	-	-	-	-	-	-	-	220,000	-
2687 Sewer Jet Rodder	45,000	-	-	-	-	-	-	-	45,000	-	-
2688 Boom Crane Truck	85,000	-	-	-	-	-	85,000	-	-	-	-
2689 Water Pump	37,000	-	-	-	-	-	37,000	-	-	-	-
2695 Trailer and HydroJet	21,000	-	-	-	-	-	-	21,000	-	-	-
2690 Tractor	35,000	-	-	-	-	-	-	-	-	35,000	-
2684 3/4 ton Pickup Truck	25,000	-	-	-	-	-	-	-	25,000	-	-
2694 Camera Truck	120,000	-	-	-	-	-	-	-	-	120,000	-
2683 1 Ton Pickup Truck	28,000	-	-	-	-	-	-	28,000	-	-	-
2692 Sewer Rotator Jet on Trailer	45,000	-	-	-	-	-	-	-	-	45,000	-
2693 Service Truck	80,000	-	-	-	-	-	80,000	-	-	-	-
2585 Managed Recharge System	17,800,000	-	2,000,000	9,000,000	6,800,000	-	-	-	-	-	-
1819 Dump Truck	140,000	-	140,000	-	-	-	-	-	-	-	-
1925 Aeration Gear Drive Rehabilitation	100,000	-	-	-	-	-	-	-	100,000	-	-
2251 New Fork Lift	40,000	-	-	40,000	-	-	-	-	-	-	-
2584 Local Limits Study	75,000	-	75,000	-	-	-	-	-	-	-	-
1922 Grit Tank Replacement	70,000	-	-	-	-	70,000	-	-	-	-	-
Total Wastewater Projects	\$ 65,572,000	\$ 345,000	\$ 3,265,000	\$ 9,170,000	\$ 7,160,000	\$ 348,000	\$ 509,000	\$ 299,000	\$ 489,000	\$ 43,737,000	\$ 250,000

Table III-9, on the following page, presents the project team's assumptions for how the wastewater capital improvement plan will be financed over the next decade. The table reveals that the CIP is forecast to be funded through a combination of development fees, existing wastewater treatment expansion funds, remaining sewer capacity funds and other non-rate revenues. The difference between the amount required by the City to fund the CIP and the amount provided by the financing tools described above must be financed through the issuance of long-term debt.

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

Input Area -- CIP FUNDING ASSUMPTIONS

Alternative 1

1 Capital Improvement Plan Input

1A Wastewater CIP

[illegible]

10 Year Forecast
2010

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
--	------	------	------	------	------	------	------	------	------	------

Total CIP	Prior Funded	Unfunded CIP
-----------	--------------	--------------

Input Area -- CIP FUNDING ASSUMPTIONS
Scenario:

Alternative 1

2 Impact Fee/ Input

Accelerators										
Wastewater										
Fee Per 5/8" - 3/4" Connection										
Impact Fee -- Wastewater	4,202	4,412	4,633	4,864	5,108	5,363	5,631	5,913	6,208	6,519
Fee Per 1" Connection										
Impact Fee -- Wastewater	7,059	7,412	7,783	8,172	8,580	9,009	9,460	9,933	10,429	10,951
Fee Per 1 1/2" Connection										
Impact Fee -- Wastewater	13,604	14,284	14,998	15,748	16,536	17,363	18,231	19,142	20,099	21,104
Fee Per 2" Connection										
Impact Fee -- Wastewater	21,683	22,767	23,906	25,101	26,356	27,674	29,057	30,510	32,036	33,637
Fee Per 3" Connection										
Impact Fee -- Wastewater	43,702	45,887	48,181	50,591	53,120	55,776	58,565	61,493	64,568	67,796
Fee Per 4" Connection										
Impact Fee -- Wastewater	69,545	73,022	76,673	80,507	84,532	88,759	93,197	97,857	102,750	107,887
Wastewater -- New Accounts	163	163	316	523	529	533	586	537	540	539
Total Impact/Connection Fee Revenue	16,289,950	16,289,950	16,289,950	16,289,950	16,289,950	16,289,950	16,289,950	16,289,950	16,289,950	16,289,950
Wastewater Treatment	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%
Wastewater Collection	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Total	\$ 24,313,358	\$ 24,313,358	\$ 24,313,358	\$ 24,313,358	\$ 24,313,358	\$ 24,313,358	\$ 24,313,358	\$ 24,313,358	\$ 24,313,358	\$ 24,313,358

10 Year Forecast
2010

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

Total CIP Prior Funded Unfunded CIP

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Input Area -- CIP FUNDING ASSUMPTIONS

Scenario:

Alternative 1

3 CIP Funding Summary

WWTP Debt Service Funding

Beginning Funds Available	\$ 11,000,000	\$ 9,288,900	\$ 7,549,413	\$ 6,256,732	\$ 5,648,947	\$ 5,128,687	\$ 4,697,705	\$ 4,549,512	\$ 4,313,304	\$ 4,188,855
Interest	3.0%	1,878,662	278,667	226,482	187,702	169,468	153,861	140,931	136,485	129,399
Impact Fees -- Wastewater Treatment		16,289,950	481,845	980,836	1,704,513	1,810,272	1,915,158	2,210,875	2,246,151	2,354,091
Total Available Funds		29,168,612	10,049,413	8,756,732	8,148,947	7,628,687	7,197,705	7,049,512	6,813,304	6,668,612
Less Impact Fees Used to Fund WW Treatment Debt Service		25,000,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Ending Funds Available		\$ 4,168,612	\$ 7,549,413	\$ 6,256,732	\$ 5,648,947	\$ 5,128,687	\$ 4,697,705	\$ 4,549,512	\$ 4,313,304	\$ 4,188,855

Capital Improvement Plan Funding

Beginning Funds Available	\$ 6,900,000	\$ 6,988,026	\$ 4,169,993	\$ 7,608,191	\$ 1,515,974	\$ 2,105,079	\$ 2,602,518	\$ 3,470,532	\$ 4,133,427	\$ 2,626,743
Interest	3.0%	1,263,614	209,641	125,100	228,246	45,479	63,152	78,076	104,116	124,003
Impact Fees -- Wastewater Collection		8,023,408	237,327	483,098	839,536	891,626	943,287	1,088,939	1,047,778	1,106,313
Plus Proceeds from Issuance of Debt -- WASTEWATER		53,000,000	-	12,000,000	-	-	-	-	-	41,000,000
Total Available Funds		69,187,023	7,434,993	16,778,191	8,675,974	2,453,079	3,111,518	3,769,532	4,622,427	3,865,023
Less CIP -- WASTEWATER		65,572,000	3,265,000	9,170,000	7,160,000	348,000	509,000	299,000	489,000	43,737,000
Ending Funds Available		\$ 3,615,023	\$ 4,169,993	\$ 7,608,191	\$ 1,515,974	\$ 2,105,079	\$ 2,602,518	\$ 3,470,532	\$ 4,133,427	\$ 2,626,743

Debt Service – Forecast

A key assumption for the City's long-term wastewater rate plan is that the City issues additional debt to fund those projects not funded through impact fees or the other sources described in the previous section. The debt forecast to be issued by the City is summarized in **Table III-10**. The table reveals that the City is forecast to require approximately **\$53,000,000** in long-term debt to finance its remaining wastewater capital improvement plan.

All new debt is assumed to be over a 25 year term at a 4.0% interest rate with 2.0% issuing costs and a five year reserve requirement. All future debt will be allocated to wastewater treatment and collection CIP projects.

TABLE III-10

CITY OF CASA GRANDE		
FORECAST BOND ISSUES		
SCENARIO:	ALT 1	
FY		Wastewater
2010	\$	-
2011		-
2012		12,000,000
2013		-
2014		-
2015		-
2016		-
2017		-
2018		41,000,000
2019		-
Total Bonds	\$	53,000,000

Table III-11 presents total forecast annual debt service.

TABLE III-11

CITY OF CASA GRANDE		
TOTAL FORECAST DEBT SERVICE		
SCENARIO:	ALT 1	
		Wastewater
2010	\$	-
2011		-
2012		-
2013		943,092
2014		943,092
2015		943,092
2016		943,092
2017		943,092
2018		785,910
2019		4,008,140

Non-Rate Revenues

Although sales revenues constitute the majority of the revenue received by the City for wastewater service, the City is relying on accruing a significant amount of revenue from non-rate sources. These revenues include other general revenues, funds with current balances that have been reserved, surcharges, development charges, and service revenues.

These additional revenue sources will be central to enabling the City to fund its significant debt service requirements and to minimize the need for future rate adjustments. These non-rate revenues are subtracted from the overall budget to determine the revenue requirement to be raised from rates. The City's top revenue producing non-rate revenue sources are as follows:

- **Sewer Capacity Fund – 521** – This represents previous sewer capacity fees that the City had collected prior to the implementation of sewer impact fees. Once impact fees were adopted, the City stopped collecting these fees. The current fund balance is \$1,484,331. Fund 521 is assumed to be 100% allocated to treatment expenses in 2010.
- **WWTP Expansion Fund – 522** – This represents the 0.3% sales tax that had been collected for the purposes of funding the wastewater treatment plant expansion. The wastewater fund no longer receives this subsidy. The current fund balance is \$12,702,679. The remaining fund balance is assumed to be amortized over 5 years.
- **Sewer Development Fees – 523** – This fund currently contains \$17.9 million for collection and treatment. The City has calculated that \$11.0 million of this total is for treatment and \$6.9 million is for collection. Only the treatment debt service can be used to underwrite the debt service for the wastewater treatment plant. The collections portion will be used for future collection related capital improvement projects. Based on the current balance of \$11.0 million in treatment-related development fees, and the forecast of additional development fees accrued during the forecast period from new connections, the project team estimates that the City will be able to fund \$2.5 million per year in debt service from development fees.

Forecast non-rate revenues are presented in **Table III-12**.

TABLE III-12

THE CITY OF CASA GRANDE						
FORECAST NON-RATE REVENUES						
SCENARIO:	ALT 1					
	521 Sewer Capacity Fund	522 WWTP Exp. Fund	523 Development Fees	Other Non-Rate Revenue	TOTAL	
2010	\$ 1,484,331	\$ 2,540,536	\$ 2,500,000	\$ 376,000	\$	6,900,867
2011	-	2,540,536	2,500,000	427,473		5,468,009
2012	-	2,540,536	2,500,000	430,330		5,470,866
2013	-	2,540,536	2,500,000	435,058		5,475,594
2014	-	2,540,536	2,500,000	439,840		5,480,376
2015	-	-	2,500,000	444,658		2,944,658
2016	-	-	2,500,000	449,955		2,949,955
2017	-	-	2,500,000	454,810		2,954,810
2018	-	-	2,500,000	459,691		2,959,691
2019	-	-	2,500,000	464,563		2,964,563



Net Revenue Requirement

Table III-13 presents the test year and ten year forecast for the City's net revenue requirement to be raised from rates. As the table reveals, debt service is the most significant portion of the total revenue requirement. However, the net revenue requirement to be raised from rates is lessened significantly by the subtraction of the estimated non-rate revenue sources. Detailed calculations are presented in the rate model contained in Appendix A of this report.

TABLE III-13

CITY OF CASA GRANDE

CURRENT AND FORECAST REVENUE REQUIREMENT

SCENARIO: ALT 1

	Operating Expenses	Current Debt Service	Future Debt Service	Operating Transfers	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
	WASTEWATER Revenue Requirement						
2010	\$ 2,440,500	\$ 6,312,380	\$ -	\$ 325,670	\$ 9,078,550	\$ 6,900,867	\$ 2,177,683
2011	2,868,276	6,781,497	-	339,131	9,988,904	5,468,009	4,520,895
2012	3,071,124	6,782,587	-	356,674	10,210,384	5,470,866	4,739,518
2013	3,291,124	6,782,817	943,092	379,927	11,396,960	5,475,594	5,921,366
2014	3,547,420	6,780,612	943,092	404,390	11,675,514	5,480,376	6,195,138
2015	3,810,733	5,850,943	943,092	430,068	11,034,835	2,944,658	8,090,177
2016	4,118,096	5,846,534	943,092	458,295	11,366,016	2,949,955	8,416,061
2017	4,427,699	6,240,754	943,092	486,494	12,098,038	2,954,810	9,143,229
2018	4,783,716	6,521,632	785,910	516,042	12,607,300	2,959,691	9,647,609
2019	5,147,743	6,522,321	4,008,140	546,884	16,225,088	2,964,563	13,260,525

Wastewater Utility Cost Functionalization and Classification

Wastewater system costs are allocated to the following functions:

Treatment -- Volume – the costs associated with treating wastewater volume discharges

Treatment -- BOD – the costs associated with treating wastewater BOD discharges

Treatment -- TSS – the costs associated with treating wastewater suspended solids (TSS) discharges

Collection – the lines that transport wastewater from customers' properties to the wastewater treatment plant

Administration – miscellaneous overhead and other non-operating costs

Customer Billing – the processes involved in billing and other services to customers

The wastewater utility operating budget line item expenses are allocated individually to functions. The results of the allocation process are presented in **Table III-14**. The rate model in Appendix A presents a detailed listing of the cost allocations by line item. These percentages are not forecast to change significantly during the next ten years.

TABLE III-14

CITY OF CASA GRANDE		
TEST YEAR WASTEWATER COST FUNCTIONALIZATION		
SCENARIO:	ALT 1	
Function	2010 Cost of Service	Percent
Treatment -- Volume	\$ 5,918,316	65.2%
Treatment -- BOD	1,181,099	13.0%
Treatment -- TSS	931,099	10.3%
Collection	586,923	6.5%
Administration	394,521	4.3%
Customer	66,592	0.7%
Total	\$ 9,078,550	100.0%

Wastewater Utility Cost Allocation

Allocation of wastewater utility costs by service characteristic to customer classes is based on the proportionate use levels of by each class. The total wastewater utility costs by customer class for the entire term of the study are summarized in **Table III-15**. Overall cost calculations are presented in detail in the rate model contained in Appendix A. The rate model in Appendix A presents a detailed listing of the cost calculations by line item.

TABLE III-15

CITY OF CASA GRANDE					
FORECAST WASTEWATER COST ALLOCATION					
SCENARIO:	ALT 1				
Year	Residential Inside	Residential Outside	Commercial	Industrial	Total
2010	\$ 1,332,573	\$ 13,357	\$ 601,167	\$ 230,586	\$ 2,177,683
2011	2,748,389	28,053	1,264,002	480,451	4,520,895
2012	2,864,943	29,436	1,306,537	538,602	4,739,518
2013	3,604,235	37,747	1,622,646	656,738	5,921,366
2014	3,758,669	40,061	1,674,928	721,480	6,195,138
2015	4,923,068	53,324	2,195,480	918,304	8,090,177
2016	5,103,861	56,575	2,260,690	994,935	8,416,061
2017	5,566,878	63,890	2,459,942	1,052,519	9,143,229
2018	5,847,006	69,952	2,575,952	1,154,699	9,647,609
2019	8,053,656	100,048	3,554,585	1,552,235	13,260,525

Section IV

SECTION IV

Wastewater Rate Design



Rate design involves determining charges for each class of customers that will generate a desired level of revenue. This section of the rate study will analyze the extent to which the City's proposed rate plan will recover revenues sufficient to fund wastewater operating and capital costs in the test year and over the forecast period.

Over the course of the engagement, the project team participated in numerous conversations and meetings with City staff. As a result of these conversations and work sessions, the project team developed the long-term rate plan presented in this section. This alternative is designed to

allow the City to recover sufficient and equivalent revenues to meet all operating and capital obligations, including the debt service required to fund the City's forecast capital improvements.

Rate Recommendation

Table IV-1 presents the set of recommended wastewater rates referred to as "Alternative 1". In this alternative, the City's flat-rate treatment and collection residential wastewater monthly charges are continued. However, the project team recommends implementing a uniform commercial customer base charge and usage charge based on the monthly water usage data provided the Arizona Water Company. In addition, the implementation of a uniform usage charge for industrial customers is also recommended. The table presents the recommended rate design for the ten year forecast period.

The following is notable about this proposed rate design:

- The rate design assumes that the City chooses to fund all debt service through monthly wastewater rates, development fees and fund balances in accounts 521, 522 and 523.
- The rate design assumes that the City will continue using non-rate revenues from Funds 521, 522 and 523 to support the rate plan.
- Because of the more significant needs of the wastewater treatment portion of the City's capital improvement plan, the rate design presents higher annual increases for wastewater treatment charges and lower annual increases for wastewater collection charges.
- The rate design ensures that wastewater rates will recover the wastewater cost of service.

- The rate design assumes that the residential vacancy credit will be terminated.
- The project team recommends that the 10 largest Significant Industrial Users (SIU) be classified as industrial customers.
- Industrial customers should be individually metered and TSS and BOD testing should be implemented.
- Rate changes are recommended to be implemented in July of each year.

TABLE IV-1

CITY OF CASA GRANDE		ALTERNATIVE 1 – ANNUAL RATE ADJUSTMENTS									
	Current	Effective Oct-09	Effective Jul-10	Effective Jul-11	Effective Jul-12	Effective Jul-13	Effective Jul-14	Effective Jul-15	Effective Jul-16	Effective Jul-17	Effective Jul-18
Wastewater Rates											
Percent Adjustment by Acct Type											
Residential - IN											
Collection		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Treatment		10.00%	10.00%	10.00%	10.00%	10.00%	15.00%	5.00%	5.00%	5.00%	20.00%
Residential - OUT											
Collection		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Treatment		10.00%	10.00%	10.00%	10.00%	10.00%	15.00%	5.00%	5.00%	5.00%	20.00%
Commercial		10.00%	10.00%	10.00%	10.00%	10.00%	25.00%	5.00%	5.00%	5.00%	20.00%
Industrial		10.00%	10.00%	10.00%	10.00%	10.00%	25.00%	5.00%	5.00%	5.00%	20.00%
Residential IN Base Charges											
Base Charge - Collection	\$ 7.50	\$ 7.73	\$ 7.96	\$ 8.20	\$ 8.44	\$ 8.69	\$ 8.96	\$ 9.22	\$ 9.50	\$ 9.79	\$ 10.08
Base Charge - Treatment	11.68	12.85	14.13	15.55	17.10	18.81	21.63	22.71	23.85	25.04	30.05
Residential OUT Base Charges											
Base Charge - Collection	\$ 11.25	\$ 11.59	\$ 11.94	\$ 12.29	\$ 12.66	\$ 13.04	\$ 13.43	\$ 13.84	\$ 14.25	\$ 14.68	\$ 15.12
Base Charge - Treatment	17.52	19.27	21.20	23.32	25.65	28.22	32.45	34.07	35.77	37.56	45.08
Commercial Base Charges											
Base Charge	\$ 8.75	\$ 9.63	\$ 10.59	\$ 11.65	\$ 12.81	\$ 14.09	\$ 17.61	\$ 18.50	\$ 19.42	\$ 20.39	\$ 24.47
Usage Charge (per 1,000 gal)	1.50	1.65	1.82	2.00	2.20	2.42	3.02	3.17	3.33	3.50	4.19
Industrial Base Charges											
Base Charges	\$ 14.58	\$ 16.04	\$ 17.64	\$ 19.41	\$ 21.35	\$ 23.48	\$ 29.35	\$ 30.82	\$ 32.36	\$ 33.98	\$ 40.77
Usage Charges (per 1,000 gal)	1.35	1.49	1.63	1.80	1.98	2.17	2.72	2.85	3.00	3.15	3.78

Table IV-2 calculates the average impact on monthly wastewater bills of the proposed rate design on customers at various usage levels. Average commercial and industrial base and usage charges are used to calculate current rates in this table. Notably, the rate plan is forecast to allow the City to continue to charge monthly wastewater rates for residential customers that are below the state average.

It should be noted that the process of standardizing commercial and industrial rates may result in significant changes to monthly charges for certain commercial customers. This is because the City has followed a process of individually calculating commercial customers' monthly bills. This may have had the unintended effect of resulting in some commercial customers paying less than their cost of service. The implementation of a uniform commercial and industrial rate is designed to ensure that all of these customers pay monthly charges equivalent to their cost of service.

TABLE IV-2

CITY OF CASA GRANDE											
ALTERNATIVE 1 -- IMPACT OF RATE PLAN ON MONTHLY CHARGES											
	Current	Effective Oct-09	Effective Jul-10	Effective Jul-11	Effective Jul-12	Effective Jul-13	Effective Jul-14	Effective Jul-15	Effective Jul-16	Effective Jul-17	Effective Jul-18
Residential-IN Monthly Wastewater Charges											
Base Charge - Collection	\$ 7.50	\$ 7.73	\$ 7.96	\$ 8.20	\$ 8.44	\$ 8.69	\$ 8.96	\$ 9.22	\$ 9.50	\$ 9.79	\$ 10.08
Base Charge - Treatment	11.68	12.65	14.13	15.55	17.10	18.81	21.63	22.71	23.85	25.04	30.05
Base Charge - TOTAL	\$ 19.18	\$ 20.57	\$ 22.09	\$ 23.74	\$ 25.54	\$ 27.51	\$ 30.59	\$ 31.94	\$ 33.35	\$ 34.83	\$ 40.13
Increase		1.39	1.52	1.65	1.80	1.96	3.08	1.35	1.41	1.48	5.30
Residential-OUT Monthly Wastewater Charges											
Base Charge - Collection	\$ 11.25	\$ 11.59	\$ 11.94	\$ 12.29	\$ 12.65	\$ 13.04	\$ 13.43	\$ 13.84	\$ 14.25	\$ 14.68	\$ 15.12
Base Charge - Treatment	17.52	19.27	21.20	23.32	25.65	28.22	32.45	34.07	35.77	37.56	45.08
Base Charge - TOTAL	\$ 28.77	\$ 30.86	\$ 33.13	\$ 35.61	\$ 38.31	\$ 41.26	\$ 45.88	\$ 47.91	\$ 50.03	\$ 52.24	\$ 60.19
Increase		2.09	2.27	2.48	2.70	2.94	4.62	2.03	2.12	2.22	7.95
Commercial Wastewater Charges											
Base Charge	\$ 8.75	\$ 9.63	\$ 10.59	\$ 11.65	\$ 12.81	\$ 14.09	\$ 17.61	\$ 18.50	\$ 19.42	\$ 20.39	\$ 24.47
Usage Charge (per 1,000 gal)	1.50	1.65	1.82	2.00	2.20	2.42	3.02	3.17	3.33	3.50	4.19
TOTAL Charge - 50,000 Gals	\$ 83.75	\$ 92.13	\$ 101.34	\$ 111.47	\$ 122.62	\$ 134.88	\$ 168.60	\$ 177.03	\$ 185.88	\$ 195.18	\$ 234.21
Increase		8.38	9.21	10.13	11.15	12.26	33.72	8.43	8.85	9.29	39.04
Industrial Wastewater Charges											
Base Charge	\$ 14.58	\$ 16.04	\$ 17.64	\$ 19.41	\$ 21.35	\$ 23.48	\$ 29.35	\$ 30.82	\$ 32.36	\$ 33.98	\$ 40.77
Usage Charge (per 1,000 gal)	1.35	1.49	1.63	1.80	1.99	2.17	2.72	2.65	3.00	3.15	3.78
TOTAL Charge - 50,000 Gals	\$ 82.08	\$ 90.29	\$ 99.32	\$ 109.25	\$ 120.17	\$ 132.19	\$ 165.24	\$ 173.50	\$ 182.18	\$ 191.28	\$ 229.54
Increase		8.21	9.03	9.93	10.92	12.02	33.05	8.26	8.68	9.11	38.26

Table IV-3 forecasts annual wastewater revenues under Alternative 1. These revenues are forecast to be sufficient to fund all wastewater operating and capital expenses.

TABLE IV-3

CITY OF CASA GRANDE				
FORECAST REVENUES				
SCENARIO: Alternative 1				
	Wastewater		Non-Rate Revenues	Total Revenues
2010	\$	4,954,401	\$ 6,900,867	\$ 11,855,268
2011		5,420,759	5,468,009	10,888,768
2012		6,038,818	5,470,866	11,509,684
2013		6,729,839	5,475,594	12,205,432
2014		7,584,436	5,480,376	13,064,811
2015		9,011,873	2,944,658	11,956,531
2016		9,871,212	2,949,955	12,821,168
2017		10,606,969	2,954,810	13,561,778
2018		11,501,026	2,959,691	14,460,717
2019		13,699,637	2,964,563	16,664,200

City Code Revisions

Finally, the adoption of the recommended rate plan will require the City to make revisions to its City code that reflect the revised rate structure. The revisions to the City code would have to include the following provisions:

- The adoption of the recommended rate structure by customer class
- The elimination of the City's current vacancy credit
- The adoption of the proposed value-based industrial rate by customer to be based on metered wastewater flows
- The adoption of the proposed value-based commercial rate to be based on water volume data submitted monthly by Arizona Water Company

These changes to the City code should ensure that the rate plan is adopted in full and is fully reflective of the rate plan as presented in this study.

Notes on Rate Recommendations

The forecast and recommendations presented in this study represent a combination of the best information available from the City and the project team's expertise. However, this forecast relies in part on assumptions about future events beyond the control of the project team (such as account growth rates within the City). The forecast and recommendations contained in this study may be subject to revision if any of the following events occurs:

- Actual growth in accounts and consumed volumes is less than (or significantly greater than) forecast
- Capital improvement plan funding costs increase significantly due to the rising cost of materials or other factors
- An unforeseen event impacts the City, such as an extended recession, natural catastrophe or terrorist attack
- City budget levels or priorities change significantly from those forecast in this study

It should be noted that none of these events are foreseen by the project team or the City at this time.

If any of these events occur the City may be compelled to consider further adjustments to its wastewater rates.

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

Current

Forecast Summary

Scenario: Alternative 1

1 **Wastewater Monthly Charges**

Wastewater Charge -- Residential - In																						
	\$	7.50	\$	7.73	\$	7.96	\$	8.20	\$	8.44	\$	8.69	\$	8.96	\$	9.22	\$	9.50	\$	9.79	\$	10.08
Base Charge - Collection		11.68		12.85		14.13		15.55		17.10		18.81		21.63		22.71		23.85		25.04		30.05
Base Charge - Treatment																						
Total		19.18		20.57		22.09		23.74		25.54		27.51		30.59		31.94		33.35		34.83		40.13
Total Increase			1.39		1.52		1.65		1.80		1.96		3.08		1.35		1.41		1.48		5.30	
Wastewater Charge -- Commercial																						
Monthly Charge	\$	8.75	\$	9.63	\$	10.59	\$	11.65	\$	12.81	\$	14.09	\$	17.61	\$	18.50	\$	19.42	\$	20.39	\$	24.47
Volume Rate Per 1,000 Gallons		1.50		1.65		1.82		2.00		2.20		2.42		3.02		3.17		3.33		3.50		4.19
60,000 Gal		98.75		108.63		119.49		131.44		144.58		159.04		198.80		208.74		219.17		230.13		276.16
Total Increase			9.88			10.86		11.95		13.14		14.46		39.76		9.94		10.44		10.96		46.03

22 Annual Revenues and Expenses

	\$	4,954,401	\$	5,420,759	\$	6,035,818	\$	6,725,839	\$	7,584,436	\$	9,011,873	\$	9,871,212	\$	10,606,969	\$	11,501,026	\$	13,699,637
Wastewater Revenues		6,900,967		5,469,009		5,470,866		5,475,594		5,480,376		2,944,658		2,949,955		2,954,810		2,959,691		2,964,563
Non-Rate Revenues		11,855,268		10,888,768		11,503,684		12,205,432		13,064,811		11,956,531		12,821,168		13,561,778		14,460,717		16,864,200
Total Revenues		2,440,500		2,868,276		3,071,124		3,291,124		3,547,420		3,810,733		4,118,095		4,427,699		4,783,716		5,147,743
Operating Expenses																				
Net Revenues Available for Transfers/Capital Outlays/Debt Ser		9,414,768		8,020,492		8,438,560		8,914,308		9,517,391		8,145,799		8,703,072		9,134,079		9,677,001		11,516,457
Transfers		325,670		339,131		356,674		379,927		404,390		430,068		458,295		486,494		516,042		546,884
Capital Outlays																				
Total Operating/Transfers/Capital Outlays		2,766,170		3,207,408		3,427,797		3,671,051		3,951,810		4,240,800		4,576,391		4,914,193		5,299,759		5,694,627
Net Revenues Available for Debt Service		9,414,768		8,020,492		8,438,560		8,914,308		9,517,391		8,145,799		8,703,072		9,134,079		9,677,001		11,516,457
Wastewater Debt Service																				
Principal and Interest		5,376,648		5,845,765		5,846,855		6,632,994		6,630,789		6,636,852		6,632,443		7,028,663		7,307,541		9,993,423
Reserve		935,732		935,732		935,732		1,092,914		1,092,914		157,182		157,182		157,182		-		537,038
Total Debt Service		6,312,380		6,781,497		6,782,587		7,725,909		7,723,704		6,794,034		6,789,625		7,183,845		7,307,541		10,530,461
Total Cost of Service		9,078,550		9,988,904		10,210,384		11,396,960		11,675,514		11,034,835		11,366,016		12,098,038		12,607,300		16,225,088
Net Revenues Available for Contingency		2,776,718		899,964		1,299,299		808,472		1,389,297		921,697		1,455,152		1,463,740		1,853,417		439,111
Percent of COS		30.6%		9.0%		12.7%		7.1%		11.9%		8.4%		12.8%		12.1%		14.7%		2.7%

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL										
Current	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019

Forecast Summary

Scenario: Alternative 1

3 Revenue Adequacy Tests

Projected Fund Balances

Beginning Funds Available

Net Revenues Available for Contingency

Ending Fund Balance

\$	-	\$	2,776,718	\$	3,676,582	\$	4,975,882	\$	5,784,354	\$	7,173,651	\$	8,095,348	\$	9,550,500	\$	11,014,240	\$	12,867,657
	2,776,718		899,864		1,299,299		808,472		1,399,297		921,697		1,455,152		1,463,740		1,953,417		439,112
	2,776,718		3,676,582		4,975,882		5,784,354		7,173,651		8,095,348		9,550,500		11,014,240		12,867,657		13,306,769

Debt Coverage

	1.75		1.37		1.44		1.34		1.44		1.23		1.31		1.30		1.32		1.15
--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------

4 Total Accounts

Total Accounts

New Accounts

Avg. Annual Growth Rate

	14,381		14,544		14,860		15,383		15,912		16,445		17,031		17,568		18,108		18,647
	-		163		316		523		529		533		586		537		540		539
	-		1.13%		2.17%		3.52%		3.44%		3.35%		3.56%		3.15%		3.07%		2.98%

5 Annual Wastewater Billing Units

Resid - In

Resid - Out

Commercial

Industrial

Other

Other

Total System

	1,292,928,000		1,307,328,000		1,336,128,000		1,384,128,000		1,432,128,000		1,480,128,000		1,532,928,000		1,580,928,000		1,628,928,000		1,676,928,000
	12,960,000		13,344,000		13,728,000		14,496,000		15,264,000		16,032,000		16,992,000		18,144,000		19,488,000		20,832,000
	608,355,482		615,484,648		624,198,072		636,080,015		651,922,606		671,725,844		691,529,083		711,332,321		731,135,560		750,938,798
	234,687,924		234,687,924		258,156,716		258,156,716		281,625,509		281,625,509		305,094,301		305,094,301		328,563,094		328,563,094
	-		-		-		-		-		-		-		-		-		-
	-		-		-		-		-		-		-		-		-		-
	-		-		-		-		-		-		-		-		-		-
	2,148,931,406		2,170,844,572		2,232,210,789		2,292,860,732		2,380,940,115		2,449,511,353		2,546,543,384		2,615,498,622		2,708,114,653		2,777,261,891

Test Year 2010	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL						
	Wastewater Budget	Volume	Treatment BOD	TSS	Collection	Admin	Customer Billing

Test Year WW 1.0 -- WASTEWATER Service Cost Functionalization
Scenario: Alternative 1

NON-RATE REVENUES

Non-Rate Revenues

General	\$
520-10-000-3430-01 Residential In	-
520-10-000-3430-03 Penalties	130,000
520-10-000-3430-04 Connection & Inspection Fees	20,000
520-10-000-3430-05 Sale of Effluent	50,000
520-10-000-3430-06 Effluent - Golf Course	45,000
520-10-000-3430-12 Pearl/Korison Rd Sewer Pay Back	6,000
520-10-000-3735-02 ADEA Plan Review Fees	10,000
250-09-451-3975-00 Transfer from Replacement Fund	95,000
Total General	376,000
Treatment	
521,000 Sewer Capacity Fund	1,484,331
522,000 WWTP Expansion - 5 year amortization	2,540,536
523,000 Sewer Development Fees - Treatment - 5 yr	2,500,000
Revenue	-
Total Treatment	6,524,867
Total Non-Rate Revenues	\$ 6,900,867

WW TREATMENT EXPENSE

PERSONNEL SERVICES

	\$
520-35-451-1101-00 Permanent Wages and Salaries	484,300
520-35-451-1110-00 Overtime	5,800
520-35-451-1205-00 Social Security Taxes	37,020
520-35-451-1210-00 Pension and Retirement	45,510
520-35-451-1215-00 Employee Insurance	58,290
520-35-451-1220-00 Worker's Compensation Insurance	25,920
520-35-451-1240-00 Training	19,700
520-35-451-1245-00 Conferences	2,600
520-35-451-1520-00 Travel and Meetings	2,600
Expense	-
Expense	-
Total Personnel Services	681,740

CONTRACTUAL SERVICES

	\$
520-35-451-2210-00 Professional Services	153,300
520-35-451-2215-00 Contractual Services	153,300
520-35-451-2220-50 Communication and Equipment Contractual	700
520-35-451-2220-70 Other Equipment	43,600
520-35-451-2225-00 City Vehicle	30,330
520-35-451-2230-00 Rentals and Leases	700
520-35-451-2230-00 Dues and Memberships	400
520-35-451-2240-00 Insurance Charges	40,250
Expense	-
Total Contractual Services	422,760

	\$	266,365	\$	48,430	\$	48,430	\$	96,860	\$	24,215
		3,190		580		580		1,160		290
		20,361		3,702		3,702		7,404		1,851
		25,031		4,551		4,551		9,102		2,276
		32,060		5,829		5,829		11,658		2,915
		14,256		2,592		2,592		5,184		1,296
		10,835		1,970		1,970		3,940		985
		1,430		260		260		520		130
		1,430		260		260		520		130
		-		-		-		-		-
		-		-		-		-		-
		374,957		68,174		68,174		136,348		34,087
		52,122		50,589		50,589		-		-
		137,970		7,665		7,665		-		-
		-		-		-		700		-
		14,892		14,454		14,454		-		-
		30,330		-		-		-		-
		700		-		-		-		-
		-		-		-		-		-
		-		-		-		-		-
		40,250		-		-		400		-
		-		-		-		-		-
		276,264		72,708		72,708		-		-
		-		-		-		-		-
		422,760		-		-		1,100		-

Test Year 2010	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL				
	Wastewater Budget	Volume	Treatment BOD	TSS	Collection
			Admin		Customer Billing

Test Year WW 1.0 – WASTEWATER Service Cost Functionalization
Scenario: Alternative 1

OPERATING SUPPLIES									
520-35-451-3305-00	7,300	-	-	-	-	-	-	-	1,825
520-35-451-3330-00	200,000	200,000	-	-	-	-	-	-	-
520-35-451-3350-00	6,200	3,410	620	620	-	-	-	-	310
520-35-451-3355-00	900	-	-	-	-	-	-	-	-
520-35-451-3360-00	14,600	14,600	-	-	-	-	-	-	-
520-35-451-3360-00	13,900	13,900	-	-	-	-	-	-	-
520-35-451-3360-00	27,270	27,270	-	-	-	-	-	-	-
520-35-451-3365-10	15,130	15,130	-	-	-	-	-	-	-
520-35-451-3365-20	600	600	-	-	-	-	-	-	-
520-35-451-3365-40	1,900	1,900	-	-	-	-	-	-	-
520-35-451-3365-50	5,500	4,400	550	550	-	-	-	-	-
520-35-451-3370-00	11,700	-	-	-	-	-	-	-	8,775
520-35-451-3385-00	500,000	250,000	250,000	-	-	-	-	-	-
520-35-451-3390-10	1,600	1,600	-	-	-	-	-	-	-
520-35-451-3390-30	13,840	-	-	-	-	-	-	-	-
520-35-451-3390-50	-	-	-	-	-	-	-	-	-
520-35-451-4310-00	-	-	-	-	-	-	-	-	-
Total Operating Supplies	820,440	532,810	251,170	1,170	-	-	24,380	-	10,910
OTHER USES									
Expense	-	-	-	-	-	-	-	-	-
Expense	-	-	-	-	-	-	-	-	-
Expense	-	-	-	-	-	-	-	-	-
Expense	-	-	-	-	-	-	-	-	-
Total Other Charges	-	-	-	-	-	-	-	-	-
TOTAL WW TREATMENT EXPENSES	\$ 1,924,960	\$ 1,184,031	\$ 392,052	\$ 142,052	\$ -	\$ -	\$ 161,828	\$ 44,957	
Percent	100.0%	61.5%	20.4%	7.4%	0.0%	0.0%	8.4%	2.3%	

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

Test Year
2010

Wastewater Budget

Customer Billing

Collection

Treatment	BOD
Control	1.0
10% Treated	1.0
20% Treated	1.0
30% Treated	1.0
40% Treated	1.0
50% Treated	1.0
60% Treated	1.0
70% Treated	1.0
80% Treated	1.0
90% Treated	1.0
100% Treated	1.0

Volume

Wastewater Budget

Test Year WW 1.0 ~ WASTEWATER Service Cost Functionalization
Scenario: Alternative 1

WWW COLLECTION EXPENDITURES[illegible]

Total Personnel Services

CONTRACTUAL SERVICES

	2019	2018	2017	2016	2015
Professional Services	\$6,700	-	-	-	\$6,700
Contractual Services	\$6,700	-	-	-	\$6,700
Communication and Equipment Contractual	300	-	-	-	300
Other Equipment	16,200	-	-	-	16,200
City Vehicle	-	-	-	-	-
Rentals and Leases	300	-	-	-	300
Dues and Memberships	200	-	-	-	200
Insurance Charges	-	-	-	-	-
Expense	-	-	-	-	-
Total Contractual Services	130,400	-	-	-	130,200

Total Contractual Services

Test Year 2010	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL				
	Wastewater Budget	Volume	Treatment BOD	TSS	Collection
Customer Billing					

Test Year WW 1.0 -- WASTEWATER Service Cost Functionalization
Scenario: Alternative 1

OPERATING SUPPLIES

520-35-451-3305-00	Office Supplies	2,700	-	-	-	2,025	675
520-35-451-3330-00	Chemical and Supply	24,300	-	-	-	-	-
520-35-451-3350-00	Clothing and Uniforms	2,300	-	-	-	24,300	-
520-35-451-3355-00	Printing and Duplication	300	-	-	-	1,725	230
520-35-451-3360-00	Maintenance Supplies	5,400	-	-	-	-	-
520-35-451-3360-0	Sewer Materials	5,100	-	-	-	5,400	-
520-35-451-3365-10	Gasoline	13,500	-	-	-	5,100	-
520-35-451-3365-20	Diesel	17,090	-	-	-	13,500	-
520-35-451-3365-40	Propane	200	-	-	-	17,090	-
520-35-451-3365-50	Lubricants	700	-	-	-	200	-
520-35-451-3370-00	Small Tools	2,000	-	-	-	700	-
520-35-451-3385-00	Postage Express & Freight	4,300	-	-	-	2,000	-
520-35-451-3390-10	Electric	128,800	-	-	-	-	3,225
520-35-451-3390-30	Water	600	-	-	-	128,800	-
520-35-451-3390-50	Telephone	3,200	-	-	-	600	-
520-35-451-4310-00	Facility Replacement	-	-	-	-	2,560	-
	Expense	-	-	-	-	-	-
	Expense	-	-	-	-	-	-
Total Operating Supplies	210,490	-	-	-	-	201,375	4,385

OTHER USES

520-35-455-4310-00	Sewer Facilities-Manhole Rehab	-	-	-	-	-	-
0.000	Expense	-	-	-	-	-	-
0.000	Expense	-	-	-	-	-	-
0.000	Expense	-	-	-	-	-	-
0.000	Expense	-	-	-	-	-	-

Total Other Charges

TOTAL WW COLLECTION EXPENSES	\$	515,540	\$	-	\$	463,163	\$	30,783	\$	21,595
Percent		100.0%		0.0%		89.8%		6.0%		4.2%

Test Year 2010		CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL				
	Wastewater Budget	Volume	Treatment BOD	TSS	Collection	Admin
						Customer Billing

Test Year WW 1.0 – WASTEWATER Service Cost Functionalization
Scenario: Alternative 1

TRANSFERS

520-99-890-9101-00	Operating Transfers	\$ 201,910	\$ -	\$ -	\$ -	\$ 201,910	\$ -
520-99-890-9101-00	Operating Transfers	123,760	-	-	-	123,760	-
	Transfer	-	-	-	-	-	-
	Transfer	-	-	-	-	-	-
	Transfer	-	-	-	-	-	-

Total Transfers	\$ 325,670	\$ -	\$ -	\$ -	\$ -	\$ 123,760	\$ 201,910
Percent	100.0%	0.0%	0.0%	0.0%	0.0%	38.0%	62.0%

CAPITAL OUTLAYS

Total Capital Outlays	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL OPERATING/TRANSFERS/CAPITAL OUTLAYS	\$ 2,766,170	\$ 1,184,031	\$ 392,052	\$ 142,052	\$ 586,923	\$ 394,521	\$ 66,592
Percent	100.0%	42.8%	14.2%	5.1%	21.2%	14.3%	2.4%

DEBT SERVICE

Wastewater Debt Service	\$ 5,376,848	na	na	na	na	na	na
P&I Reserve	935,732	na	na	na	na	na	na
TOTAL DEBT SERVICE – WASTEWATER	\$ 6,312,580	\$ 4,734,285	\$ 789,047	\$ 789,047	\$ -	\$ -	\$ -
	100.0%	75.0%	12.5%	12.5%	0.0%	0.0%	0.0%

TOTAL COST OF SERVICE

TOTAL COST OF SERVICE	\$ 9,078,550	\$ 5,918,316	\$ 1,181,099	\$ 931,099	\$ 586,923	\$ 394,521	\$ 66,592
	100.0%	65.2%	13.0%	10.3%	6.5%	4.3%	0.7%

Test Year 2010	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL				
	Wastewater Budget	Volume	Treatment BOD	TSS	Customer Billing

Test Year WW 2.0 – WASTEWATER Service Cost Functionalization
Scenario: **Alternative 1**

TOTAL WASTEWATER COST OF SERVICE

WW Treatment Operating Costs									
Personnel	\$ 681,740	\$ 374,957	\$ 68,174	\$ 68,174	\$ -	\$ 136,348	\$ 34,087		
Contractual Services	422,780	276,264	72,708	72,708	-	1,100	-		
Operating Supplies	820,440	532,810	251,170	1,170	-	24,380	10,910		
Total Other Charges	-	-	-	-	-	-	-		
Total	\$ 1,924,960	\$ 1,184,031	\$ 392,052	\$ 142,052	\$ -	\$ 161,828	\$ 44,997		
Percent	100.0%	61.5%	20.4%	7.4%	0.0%	8.4%	2.3%		
WW Collection Operating Costs									
Personnel	\$ 174,850	\$ -	\$ -	\$ -	\$ 130,988	\$ 26,188	\$ 17,465		
Contractual Services	130,400	-	-	-	130,200	200	-		
Operating Supplies	210,490	-	-	-	201,975	4,385	4,130		
Total Other Charges	-	-	-	-	-	-	-		
Total	\$ 515,540	\$ -	\$ 0.0%	\$ 0.0%	\$ 463,163	\$ 30,783	\$ 21,595		
Percent	100.0%	0.0%	0.0%	0.0%	89.8%	6.0%	4.2%		
Transfers									
Percent	\$ 325,670	\$ -	\$ -	\$ -	\$ 123,760	\$ 201,910	\$ -		
	100.0%	0.0%	0.0%	0.0%	38.0%	62.0%	0.0%		
Capital Expenses									
Capital Outlays	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Debt Service	\$ 6,312,380	\$ 4,734,285	\$ 789,047	\$ 789,047	\$ -	\$ -	\$ -		
Total	\$ 6,312,380	\$ 4,734,285	\$ 789,047	\$ 789,047	\$ -	\$ -	\$ -		
Total Cost of Service	\$ 9,078,550	\$ 5,918,316	\$ 1,181,099	\$ 931,099	\$ 586,923	\$ 394,521	\$ 66,592		
Percent	100.0%	65.2%	13.0%	10.3%	6.5%	4.3%	0.7%		

ALLOCATION OF ADMINISTRATION EXPENSES

Cost of Service net of Administration	\$ 8,694,029	\$ 5,918,316	\$ 1,181,099	\$ 931,099	\$ 586,923	\$ -	\$ 66,592		
Percent	100.0%	68.2%	13.6%	10.7%	6.8%	0.0%	0.8%		
Administration									
Percent	\$ 394,521	\$ 268,873	\$ 53,658	\$ 42,300	\$ 26,664	\$ -	\$ 3,025		
	100.0%	68.2%	13.6%	10.7%	6.8%	0.0%	0.8%		
Allocated Cost of Service	\$ 9,078,550	\$ 6,187,188	\$ 1,234,758	\$ 973,400	\$ 613,587	\$ -	\$ 69,617		
Percent	100.0%	68.2%	13.6%	10.7%	6.8%	0.0%	0.8%		

ALLOCATION OF NON-RATE REVENUES

Allocated Cost of Service	\$ 9,078,550	\$ 6,187,188	\$ 1,234,758	\$ 973,400	\$ 613,587	\$ -	\$ 69,617		
Percent – General	100.0%	68.2%	13.6%	10.7%	6.8%	0.0%	0.8%		
Percent – Treatment	100.0%	73.7%	14.7%	11.6%	11.6%	0.0%	0.8%		

Test Year 2010	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL				
	Wastewater Budget	Volume	Treatment BOD	ISS	Collection Admin

Test Year WW 2.0 -- WASTEWATER Service Cost Functionalization
Scenario: Alternative 1

Non-Rate Revenue Allocation									
General	\$ 376,000	256,250	51,139	40,315	25,412	-	2,883		
Treatment	6,524,867	4,808,686	959,654	756,527	25,412	-	2,883		
Total	6,900,867	5,064,936	1,010,793	796,841					
Allocated Wastewater Revenue Requirement	\$ 2,177,683	\$ 1,122,252	\$ 223,964	\$ 176,558	\$ 588,174	\$ -	\$ 66,734		
Percent	100.0%	51.5%	10.3%	8.1%	27.0%	0.0%	3.1%		

Forecast WW 3.0 – WASTEWATER Service Revenue Requirement Raised from Rates Scenario: Alternative 1

Non-Rate Revenues

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10 Year Forecast
2010CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

Test Year Forecast

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

Forecast WW 3.0 – WASTEWATER Service Revenue Requirement Raised from Rates

Scenario:

Alternative 1

WW TREATMENT EXPENSE

PERSONNEL SERVICES	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
520-35-451-1101-00 Permanent Wages and Salaries	\$ 484,300	\$ 537,573	\$ 584,452	\$ 592,874	\$ 622,308	\$ 653,423	\$ 686,095	\$ 720,398	\$ 755,416	\$ 794,240
520-35-451-1110-00 Overtime	5,800	6,439	6,760	7,068	7,453	7,825	8,217	8,628	9,059	9,512
520-35-451-1205-00 Social Security Taxes	37,020	41,082	43,147	45,304	47,569	49,948	52,445	55,067	57,821	60,712
520-35-451-1210-00 Pension and Retirement	45,510	50,516	55,586	61,124	67,237	73,961	81,357	89,482	98,442	108,288
520-35-451-1215-00 Employee Insurance	58,290	64,702	71,172	78,289	86,118	94,730	104,203	114,623	126,066	138,584
520-35-451-1220-00 Worker's Compensation Insurance	25,920	28,771	31,048	34,813	38,204	42,124	46,338	50,970	56,067	61,674
520-35-451-1240-00 Training	18,700	21,887	22,960	24,108	25,314	26,579	27,908	29,304	30,789	32,308
520-35-451-1245-00 Conferences	2,600	2,886	3,030	3,182	3,341	3,508	3,683	3,868	4,061	4,264
520-35-451-1520-00 Travel and Meetings	2,600	2,886	3,030	3,182	3,341	3,508	3,683	3,868	4,061	4,264
0 Expense	-	-	-	-	-	-	-	-	-	-
0 Expense	-	-	-	-	-	-	-	-	-	-
Total Personnel Services	\$ 981,740	\$ 756,731	\$ 801,767	\$ 840,775	\$ 900,975	\$ 955,607	\$ 1,013,628	\$ 1,076,219	\$ 1,142,764	\$ 1,213,653
CONTRACTUAL SERVICES	\$ 153,300	\$ 157,889	\$ 162,838	\$ 167,515	\$ 172,541	\$ 177,717	\$ 183,048	\$ 188,540	\$ 194,198	\$ 200,022
520-35-451-2210-00 Professional Services	153,300	157,889	162,838	167,515	172,541	177,717	183,048	188,540	194,198	200,022
520-35-451-2215-00 Contractual Services	700	729	767	817	869	924	985	1,043	1,109	1,175
520-35-451-2220-00 Communication and Equipment Contractua	43,800	45,810	47,970	51,097	54,387	57,841	61,537	65,429	69,404	73,551
520-35-451-2225-00 Other Equipment	30,330	31,594	33,217	35,383	37,661	40,063	42,681	45,308	48,060	50,932
520-35-451-2230-00 City Vehicle	700	729	767	817	869	924	985	1,043	1,109	1,175
520-35-451-2235-00 Rentals and Leases	400	412	424	437	450	464	478	492	507	522
520-35-451-2240-00 Dues and Memberships	40,250	41,458	42,701	43,982	45,302	46,661	48,061	49,502	50,987	52,517
520-35-451-2245-00 Insurance Charges	-	-	-	-	-	-	-	-	-	-
0 Expense	-	-	-	-	-	-	-	-	-	-
Total Contractual Services	\$ 422,780	\$ 436,319	\$ 451,118	\$ 467,583	\$ 484,620	\$ 502,300	\$ 520,623	\$ 539,602	\$ 559,587	\$ 579,917
OPERATING SUPPLIES	\$ 7,300	\$ 7,519	\$ 7,745	\$ 7,977	\$ 8,218	\$ 8,463	\$ 8,711	\$ 8,978	\$ 9,247	\$ 9,525
520-35-451-3305-00 Office Supplies	200,000	240,000	253,984	268,505	288,874	303,743	324,887	343,431	365,895	388,214
520-35-451-3310-00 Chemical and Supply	6,200	6,882	7,088	7,301	7,520	7,746	7,978	8,217	8,464	8,718
520-35-451-3315-00 Clothing and Uniforms	900	937	966	1,050	1,118	1,189	1,267	1,344	1,428	1,511
520-35-451-3320-00 Printing and Duplication	14,800	17,520	18,541	19,901	20,942	22,173	23,717	25,070	26,710	28,194
520-35-451-3325-00 Maintenance Supplies	13,900	16,880	17,652	18,981	19,998	21,110	22,580	23,868	25,430	26,842
520-35-451-3330-00 Sewer Materials	27,270	32,724	35,267	40,154	44,909	49,785	55,751	61,720	68,543	76,109
520-35-451-3335-10 Gasoline	15,130	18,156	20,122	22,278	24,918	27,627	30,632	34,244	38,198	42,227
520-35-451-3335-20 Diesel	900	720	766	883	988	1,086	1,227	1,358	1,515	1,675
520-35-451-3335-40 Propane	1,600	2,280	2,527	2,788	3,120	3,489	3,894	4,300	4,787	5,303
520-35-451-3335-50 Lubricants	5,500	6,000	6,085	7,384	7,869	8,353	8,834	9,444	10,082	10,821
520-35-451-3370-00 Small Tools	11,700	12,184	12,814	13,649	14,528	15,451	16,485	17,478	18,539	19,647
520-35-451-3385-00 Postage Express & Freight	500,000	750,000	831,201	920,281	1,026,258	1,141,239	1,277,748	1,414,565	1,577,820	1,744,333
520-35-451-3390-10 Electric	1,800	1,820	2,032	2,148	2,295	2,430	2,598	2,747	2,927	3,080
520-35-451-3390-30 Water	13,840	14,396	15,235	16,108	17,208	18,220	19,488	20,801	21,948	23,167
520-35-451-3390-50 Telephone	-	-	-	-	-	-	-	-	-	-
520-35-451-4310-00 Facility Replacement	-	-	-	-	-	-	-	-	-	-
0 Expense	-	-	-	-	-	-	-	-	-	-
0 Expense	-	-	-	-	-	-	-	-	-	-
Total Operating Supplies	\$ 820,440	\$ 1,128,518	\$ 1,233,976	\$ 1,346,776	\$ 1,468,726	\$ 1,592,102	\$ 1,806,171	\$ 1,977,367	\$ 2,181,820	\$ 2,387,175
OTHER USES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expense	-	-	-	-	-	-	-	-	-	-
Expense	-	-	-	-	-	-	-	-	-	-
Expense	-	-	-	-	-	-	-	-	-	-
Expense	-	-	-	-	-	-	-	-	-	-
Expense	-	-	-	-	-	-	-	-	-	-
TOTAL WW TREATMENT OPERATING EXPENSE	\$ 1,924,960	\$ 2,321,589	\$ 2,498,862	\$ 2,686,114	\$ 2,875,321	\$ 3,060,009	\$ 3,341,021	\$ 3,593,488	\$ 3,884,171	\$ 4,181,044

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10 Year Forecast 2010		CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL							
Test Year 2010	Forecast 2011	2012	2013	2014	2015	2016	2017	2018	2019

Forecast WW 3.0 – WASTEWATER Service Revenue Requirement Raised from Rates
Alternative 1

TRANSFERS									
520-88-880-9101-00 Operating Transfers	\$ 201,910	\$ 210,256	\$ 221,132	\$ 235,548	\$ 250,715	\$ 266,635	\$ 284,135	\$ 301,818	\$ 319,838
520-88-880-9101-00 Operating Transfers	123,760	128,878	135,542	144,379	153,875	163,433	174,160	184,878	196,105
Transfers	-	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-	-
TOTAL TRANSFERS	\$ 325,670	\$ 339,131	\$ 356,674	\$ 379,927	\$ 404,590	\$ 430,068	\$ 458,295	\$ 486,494	\$ 516,042
CAPITAL OUTLAYS - WASTEWATER									
Treatment – Volume	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treatment – BOD	-	-	-	-	-	-	-	-	-
Treatment – TSS	-	-	-	-	-	-	-	-	-
Collection	-	-	-	-	-	-	-	-	-
Administration	-	-	-	-	-	-	-	-	-
Customer	-	-	-	-	-	-	-	-	-
TOTAL WW CAPITAL OUTLAYS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DEBT SERVICE									
Wastewater Debt Service	\$ 5,378,948	\$ 5,845,795	\$ 5,848,855	\$ 6,632,894	\$ 6,830,780	\$ 6,638,852	\$ 6,632,443	\$ 7,026,863	\$ 7,307,541
Principal & Interest	835,732	835,732	835,732	1,092,914	1,092,914	157,182	157,182	157,182	-
Reserve	-	-	-	-	-	-	-	-	-
TOTAL DEBT SERVICE	\$ 6,312,380	\$ 6,781,487	\$ 6,782,587	\$ 7,725,908	\$ 7,723,704	\$ 6,794,034	\$ 6,789,625	\$ 7,183,845	\$ 7,307,541
TOTAL COST OF SERVICE									
TOTAL WASTEWATER COST OF SERVICE	\$ 9,078,550	\$ 9,988,904	\$ 10,210,384	\$ 11,396,960	\$ 11,875,514	\$ 11,034,835	\$ 11,396,016	\$ 12,098,038	\$ 12,607,300
NON-RATE REVENUES									
TOTAL NON-RATE REVENUES	\$ 6,900,867	\$ 5,488,009	\$ 5,470,868	\$ 5,475,594	\$ 5,480,376	\$ 2,944,659	\$ 2,949,955	\$ 2,954,810	\$ 2,959,891
TOTAL REVENUE REQUIREMENT									
TOTAL WASTEWATER REVENUE REQUIREMENT	\$ 2,177,683	\$ 4,520,895	\$ 4,739,518	\$ 5,921,366	\$ 6,185,138	\$ 8,090,177	\$ 8,416,061	\$ 9,143,228	\$ 9,647,609

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

Test Year Forecast

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Forecast WW 4.0 -- Wastewater Service Cost Functionalization
Scenario: Alternative 1

OPERATING EXPENSES

WW Treatment Allocation Factor

Treatment -- Volume	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%	61.5%
Treatment -- BOD	20.4%	20.4%	20.4%	20.4%	20.4%	20.4%	20.4%	20.4%	20.4%	20.4%
Treatment -- TSS	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%
Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administration	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%
Customer	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Cost										
Treatment -- Volume	\$ 1,184,031	\$ 1,427,983	\$ 1,528,653	\$ 1,639,911	\$ 1,768,592	\$ 1,900,845	\$ 2,055,042	\$ 2,210,332	\$ 2,389,130	\$ 2,571,735
Treatment -- BOD	392,052	472,828	506,493	543,001	585,610	629,335	680,458	731,877	791,080	851,543
Treatment -- TSS	142,052	171,320	183,517	196,745	212,184	228,027	246,550	265,181	286,632	308,539
Collection	-	-	-	-	-	-	-	-	-	-
Administration	161,828	195,170	209,066	224,136	241,723	259,772	280,874	302,088	326,535	351,493
Customer	44,997	54,268	58,132	62,322	67,212	72,231	78,098	84,000	90,795	97,734
Total	\$ 1,824,960	\$ 2,321,569	\$ 2,486,862	\$ 2,666,114	\$ 2,875,321	\$ 3,090,009	\$ 3,341,021	\$ 3,593,488	\$ 3,884,171	\$ 4,181,044

WW Collection Allocation Factor

Treatment -- Volume	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment -- BOD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment -- TSS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Collection	89.8%	89.8%	89.8%	89.8%	89.8%	89.8%	89.8%	89.8%	89.8%	89.8%
Administration	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Customer	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Cost										
Treatment -- Volume	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treatment -- BOD	-	-	-	-	-	-	-	-	-	-
Treatment -- TSS	-	-	-	-	-	-	-	-	-	-
Collection	463,163	491,163	524,903	561,510	603,816	647,500	698,125	749,457	808,154	868,485
Administration	30,783	32,643	34,886	37,319	40,131	43,034	46,399	49,810	53,711	57,721
Customer	21,595	22,901	24,474	26,190	28,153	30,190	32,550	34,944	37,680	40,493
Total	\$ 515,540	\$ 546,707	\$ 584,262	\$ 625,009	\$ 672,099	\$ 720,724	\$ 777,075	\$ 834,211	\$ 899,545	\$ 966,699

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODELTest Year Forecast
2010 2011

2019

2018

2017

2016

2015

2014

2013

2012

Forecast WW 4.0 -- Wastewater Service Cost Functionalization
Scenario: Alternative 1

TRANSFERS

Allocation Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment -- Volume	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment -- BOD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment -- TSS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Collection	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%
Administration	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%
Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

<u>Total Cost</u>																				
Treatment -- Volume	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	
Treatment -- BOD		-		-		-		-		-		-		-		-		-		
Treatment -- TSS		-		-		-		-		-		-		-		-		-		
Collection	123,760	128,876	135,542	144,379	153,675	163,433	174,160	184,876	196,105	207,825	219,544	231,263	242,982	254,701	266,420	278,139	289,858	301,577	313,296	
Administration	201,910	210,256	221,132	235,548	250,715	266,635	284,135	301,618	319,938	339,059	358,179	377,299	396,419	415,539	434,659	453,779	472,899	492,019	511,139	
Customer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	\$	325,670	\$	339,131	\$	356,674	\$	379,927	\$	404,390	\$	430,068	\$	458,295	\$	486,494	\$	516,042	\$	546,884

CAPITAL OUTLAYS

Treatment -- Volume	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$
Treatment -- BOD		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Treatment -- TSS		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Collection		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Administration		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Customer		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Outlays	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$

DEBT SERVICE

Treatment -- Volume	\$	4,734,285	\$	5,086,123	\$	5,086,940	\$	5,794,431	\$	5,792,778	\$	5,095,526	\$	5,092,219	\$	5,387,884	\$	5,480,556	\$	7,897,845
Treatment -- BOD		789,047	847,887	847,823	965,739	965,463	848,703	897,981	913,443	913,443	849,254	848,703	897,981	897,981	848,703	897,981	913,443	913,443	1,316,308	1,316,308
Treatment -- TSS		789,047	847,887	847,823	965,739	965,463	848,703	897,981	913,443	913,443	849,254	848,703	897,981	897,981	848,703	897,981	913,443	913,443	1,316,308	1,316,308
Collection		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Administration		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Customer		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Debt Service	\$	6,312,380	\$	6,781,497	\$	6,782,587	\$	7,725,909	\$	7,723,704	\$	6,794,034	\$	6,789,625	\$	7,183,845	\$	7,307,541	\$	10,530,461

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL										
Test Year 2010	Forecast 2011	2012	2013	2014	2015	2016	2017	2018	2019	

Forecast WW 4.0 – Wastewater Service Cost Functionalization
Scenario: Alternative 1

TOTAL COST OF SERVICE

Total Wastewater Cost of Service	\$	5,918,316	\$	6,514,105	\$	6,616,593	\$	7,434,342	\$	7,561,370	\$	6,996,171	\$	7,147,261	\$	7,598,216	\$	7,868,786	\$	10,459,580
Treatment – Volume		1,181,099		1,320,516		1,354,316		1,508,740		1,551,073		1,478,589		1,529,161		1,625,858		1,704,523		2,157,851
Treatment – BOD		931,089		1,019,007		1,031,341		1,162,484		1,177,647		1,077,281		1,095,253		1,163,161		1,200,074		1,624,847
Treatment – TSS		586,923		620,039		660,445		705,889		757,491		810,933		872,285		934,333		1,004,258		1,076,310
Collection		394,521		438,070		485,084		497,003		532,569		569,440		611,407		653,526		700,184		748,273
Administration		66,592		77,168		82,605		88,502		95,365		102,420		110,648		118,943		128,475		138,227
Customer																				
Total	\$	9,078,550	\$	9,988,904	\$	10,210,384	\$	11,396,960	\$	11,675,514	\$	11,034,835	\$	11,366,016	\$	12,098,038	\$	12,607,300	\$	16,225,088

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

10 Year Forecast 2010	Test Year 2010	Forecast 2011	2012	2013	2014	2015	2016	2017	2018	2019
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Forecast WW 5.0 – Customer and Volume Totals

Scenario: Alternative 1

WASTEWATER BILLING UNITS

Customer Class Units – Base Annual Usage										
Resid - In	1,307,328,000	1,384,128,000	1,432,128,000	1,480,128,000	1,532,928,000	1,580,928,000	1,628,928,000	1,676,928,000	1,724,928,000	1,772,928,000
Resid - Out	12,960,000	13,728,000	14,496,000	15,264,000	16,032,000	16,800,000	17,568,000	18,336,000	19,104,000	19,872,000
Commercial	608,355,482	624,198,072	640,040,662	655,883,252	671,725,842	687,568,432	703,411,022	719,253,612	735,096,202	750,938,792
Industrial	234,687,924	258,156,716	281,625,509	305,094,301	328,563,094	352,031,886	375,500,678	398,969,470	422,438,262	445,907,054
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	2,148,931,406	2,292,860,732	2,380,940,115	2,469,019,498	2,557,098,881	2,645,178,264	2,733,257,647	2,821,337,030	2,909,416,413	2,997,495,796
Percent Growth		1.02%	3.84%	2.88%	3.96%	3.54%	3.54%	3.54%	3.54%	3.54%

Forecast Loadings

Total System	2,148,931,406	2,170,844,572	2,232,210,789	2,293,576,998	2,354,943,207	2,416,309,416	2,477,675,625	2,539,041,834	2,600,408,043	2,661,774,252
Percent Growth		1.02%	2.83%	2.72%	2.72%	2.72%	2.72%	2.72%	2.72%	2.72%
BOD -- mg/l	300	300	300	300	300	300	300	300	300	300
TSS -- mg/l	300	300	300	300	300	300	300	300	300	300
BOD -- Total mg	2,443,921,080,599	2,468,842,326,434	2,538,632,451,711	2,607,607,977,800	2,676,583,503,889	2,745,559,029,978	2,814,534,556,067	2,883,510,082,156	2,952,485,608,245	3,021,461,134,334
TSS -- Total mg	2,443,921,080,599	2,468,842,326,434	2,538,632,451,711	2,607,607,977,800	2,676,583,503,889	2,745,559,029,978	2,814,534,556,067	2,883,510,082,156	2,952,485,608,245	3,021,461,134,334
BOD -- Total lbs.	5,376,626	5,431,453	5,584,991	5,738,529	5,892,067	6,045,605	6,199,143	6,352,681	6,506,219	6,659,757
TSS -- Total lbs.	5,376,626	5,431,453	5,584,991	5,738,529	5,892,067	6,045,605	6,199,143	6,352,681	6,506,219	6,659,757
Industrial Consumption	234,687,924	234,687,924	258,156,716	281,625,509	305,094,301	328,563,094	352,031,886	375,500,678	398,969,470	422,438,262
BOD -- mg/l	300	300	300	300	300	300	300	300	300	300
TSS -- mg/l	300	300	300	300	300	300	300	300	300	300
BOD -- Total mg	266,904,175,385	266,904,175,385	293,594,592,924	320,285,010,463	346,975,428,001	373,665,845,540	398,969,470,079	422,438,262,618	445,907,054,157	469,375,839,696
TSS -- Total mg	266,904,175,385	266,904,175,385	293,594,592,924	320,285,010,463	346,975,428,001	373,665,845,540	398,969,470,079	422,438,262,618	445,907,054,157	469,375,839,696
BOD -- Total lbs.	587,189	587,189	645,908	704,627	763,346	822,065	880,784	939,503	998,222	1,056,941
TSS -- Total lbs.	587,189	587,189	645,908	704,627	763,346	822,065	880,784	939,503	998,222	1,056,941

10 Year Forecast
2010Test Year
2010Forecast
2011CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

2019

2018

2017

2016

2015

2014

2013

2012

Forecast
2011

Forecast WW 5.0 - Customer and Volume Totals

Scenario: Alternative 1

Net Loadings - Retail

Resid - In	1,292,928,000	1,307,328,000	1,336,128,000	1,384,128,000	1,432,128,000	1,480,128,000	1,532,928,000	1,580,928,000	1,628,928,000	1,676,928,000
Resid - Out	12,960,000	13,344,000	13,728,000	14,496,000	15,264,000	16,032,000	16,992,000	18,144,000	19,488,000	20,932,000
Commercial	608,355,482	615,484,648	624,198,072	636,080,015	651,922,806	671,725,844	691,529,083	711,332,321	731,135,560	750,938,788
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total Retail	1,914,243,482	1,936,156,648	1,974,054,072	2,034,704,015	2,099,314,606	2,167,885,844	2,241,449,083	2,310,404,321	2,379,551,560	2,448,698,798

BOD -- mg/l

TSS -- mg/l	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
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BOD -- Total mg

TSS -- Total mg	2,177,016,905,213	2,201,938,151,049	2,245,037,858,787	2,314,013,384,876	2,387,493,247,540	2,465,477,446,779	2,549,138,911,473	2,627,559,823,440	2,706,199,091,770	2,784,838,360,100
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BOD -- Total lbs.

TSS -- Total lbs.	4,789,437	4,844,264	4,939,083	5,090,829	5,252,485	5,424,050	5,608,106	5,780,632	5,953,638	6,126,644
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Customer Class Units - BOD Total mg

Resid - In	1,470,411,752,727	1,486,788,480,000	1,519,541,934,545	1,574,131,025,455	1,628,720,116,364	1,683,309,207,273	1,743,357,207,273	1,797,946,298,182	1,852,535,389,091	1,907,124,480,000
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Resid - Out

Commercial	14,739,054,545	15,175,767,273	15,612,480,000	16,485,905,455	17,359,330,909	18,232,756,364	19,324,538,182	20,634,676,364	22,163,170,909	23,691,665,455
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Commercial

Other	691,866,097,941	699,973,903,776	709,883,444,241	723,396,453,967	741,413,800,267	763,935,483,143	786,457,166,019	808,978,848,894	831,500,531,770	854,022,214,646
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Other

Other	-	-	-	-	-	-	-	-	-	-
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Other

Total	2,177,016,905,213	2,201,938,151,049	2,245,037,858,787	2,314,013,384,876	2,387,493,247,540	2,465,477,446,779	2,549,138,911,473	2,627,559,823,440	2,706,199,091,770	2,784,838,360,100
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Customer Class Units - TSS Total mg

Resid - In	1,470,411,752,727	1,486,788,480,000	1,519,541,934,545	1,574,131,025,455	1,628,720,116,364	1,683,309,207,273	1,743,357,207,273	1,797,946,298,182	1,852,535,389,091	1,907,124,480,000
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Resid - Out

Commercial	14,739,054,545	15,175,767,273	15,612,480,000	16,485,905,455	17,359,330,909	18,232,756,364	19,324,538,182	20,634,676,364	22,163,170,909	23,691,665,455
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Commercial

Other	691,866,097,941	699,973,903,776	709,883,444,241	723,396,453,967	741,413,800,267	763,935,483,143	786,457,166,019	808,978,848,894	831,500,531,770	854,022,214,646
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Other

Other	-	-	-	-	-	-	-	-	-	-
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Other

Total	2,177,016,905,213	2,201,938,151,049	2,245,037,858,787	2,314,013,384,876	2,387,493,247,540	2,465,477,446,779	2,549,138,911,473	2,627,559,823,440	2,706,199,091,770	2,784,838,360,100
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10 Year Forecast

2010

Test Year

Forecast

2011

2010

2012

2013

2014

2015

2016

2017

2018

2019

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL****Forecast WW 5.0 – Customer and Volume Totals****Scenario:****Alternative 1****Customer Class Units – BOD Total Lbs.**

Resid - In	3,234,906	3,270,935	3,342,992	3,463,088	3,583,184	3,703,280	3,835,386	3,955,482	4,075,578	4,195,674
Resid - Out	32,426	33,387	34,347	36,269	38,191	40,112	42,514	45,396	48,759	52,122
Commercial	1,522,105	1,539,943	1,561,744	1,591,472	1,631,110	1,680,658	1,730,206	1,779,753	1,829,301	1,878,849
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total	4,789,437	4,844,264	4,939,083	5,090,829	5,252,485	5,424,050	5,608,106	5,780,632	5,953,638	6,126,644

Customer Class Units – TSS Total Lbs.

Resid - In	3,234,906	3,270,935	3,342,992	3,463,088	3,583,184	3,703,280	3,835,386	3,955,482	4,075,578	4,195,674
Resid - Out	32,426	33,387	34,347	36,269	38,191	40,112	42,514	45,396	48,759	52,122
Commercial	1,522,105	1,539,943	1,561,744	1,591,472	1,631,110	1,680,658	1,730,206	1,779,753	1,829,301	1,878,849
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total	4,789,437	4,844,264	4,939,083	5,090,829	5,252,485	5,424,050	5,608,106	5,780,632	5,953,638	6,126,644

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL										
10 Year Forecast	Test Year	Forecast	2012	2013	2014	2015	2016	2017	2018	2019
2010	2010	2011								

Forecast WW 5.0 – Customer and Volume Totals

Scenario: Alternative 1

WASTEWATER CUSTOMERS

Total Bills										
Resid - In	161,616	163,415	167,016	173,016	179,016	185,016	191,616	197,616	203,616	209,616
Resid - Out	1,620	1,668	1,716	1,812	1,908	2,004	2,124	2,268	2,436	2,604
Commercial	9,216	9,324	9,456	9,536	9,876	10,176	10,476	10,776	11,076	11,376
Industrial	120	120	132	132	144	144	156	156	168	168
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	172,572	174,528	178,320	184,596	190,944	197,340	204,372	210,816	217,296	223,764
Percent Growth		1.13%	2.17%	3.52%	3.44%	3.35%	3.56%	3.15%	3.07%	2.98%
Percentage of Total										
Resid - In	93.65%	93.63%	93.66%	93.73%	93.75%	93.75%	93.76%	93.74%	93.70%	93.69%
Resid - Out	0.94%	0.96%	0.96%	0.98%	1.00%	1.02%	1.04%	1.06%	1.12%	1.16%
Commercial	5.34%	5.34%	5.30%	5.22%	5.17%	5.16%	5.13%	5.11%	5.10%	5.09%
Industrial	0.07%	0.07%	0.07%	0.07%	0.08%	0.07%	0.08%	0.07%	0.08%	0.08%
Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total System	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total Customers										
Resid - In	13,468	13,618	13,918	14,418	14,918	15,418	15,968	16,468	16,968	17,468
Resid - Out	135	139	143	151	159	167	177	189	203	217
Commercial	768	777	788	803	823	848	873	898	923	948
Industrial	10	10	11	11	12	12	13	13	14	14
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	14,361	14,544	14,860	15,383	15,912	16,445	17,031	17,568	18,108	18,647
Percent Growth		1.13%	2.17%	3.52%	3.44%	3.35%	3.56%	3.15%	3.07%	2.98%
New Customers										
Resid - In	150	150	300	500	500	500	550	500	500	500
Resid - Out	4	4	4	8	8	8	10	12	14	14
Commercial	9	9	11	15	20	25	25	25	25	25
Industrial	-	-	1	-	1	-	1	-	1	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total System	163	163	316	523	529	533	586	537	540	539

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL											
10 Year Forecast 2010											
Test Year	Forecast	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019

Forecast WW 6.0 – WASTEWATER Treatment Cost Functionalization
Scenario: Alternative 1

Total Functionalized Cost										
Treatment – Volume	\$ 1,122,252	\$ 2,812,730	\$ 2,935,430	\$ 3,768,431	\$ 3,920,404	\$ 5,248,522	\$ 5,425,992	\$ 5,902,113	\$ 6,202,694	\$ 8,826,314
Treatment – BOD	223,964	570,186	600,838	764,773	804,197	1,109,236	1,160,894	1,266,035	1,343,446	1,827,593
Treatment – TSS	176,558	439,998	457,551	589,257	610,584	808,175	831,484	903,516	945,857	1,369,817
Total	\$ 1,522,775	\$ 3,822,914	\$ 3,993,818	\$ 5,122,460	\$ 5,335,185	\$ 7,165,933	\$ 7,418,371	\$ 8,071,664	\$ 8,491,998	\$ 12,023,724

Estimated Total Pounds Removed

BOD	5,376,626	5,431,453	5,584,991	5,736,738	5,957,112	6,128,677	6,371,452	6,543,978	6,775,703	6,948,709
TSS	5,376,626	5,431,453	5,584,991	5,736,738	5,957,112	6,128,677	6,371,452	6,543,978	6,775,703	6,948,709

Unit Cost Per Pound – Total System

BOD	\$ 0.04	\$ 0.10	\$ 0.11	\$ 0.13	\$ 0.13	\$ 0.18	\$ 0.18	\$ 0.19	\$ 0.20	\$ 0.26
TSS	\$ 0.03	\$ 0.08	\$ 0.08	\$ 0.10	\$ 0.10	\$ 0.13	\$ 0.13	\$ 0.14	\$ 0.14	\$ 0.20

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL												
Test Year	Forecast	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	

Forecast WW 7.0 – Wastewater Service Cost Functionalization by Customer Class
Scenario: Alternative 1

NET REVENUE REQUIREMENT

Allocated Net Revenue Requirement

Treatment																		
Treatment – Volume	\$	1,122,252	\$	2,812,730	\$	2,935,430	\$	3,768,431	\$	3,920,404	\$	5,248,522	\$	5,902,113	\$	6,202,694	\$	8,826,314
Treatment – BOD		223,964		570,186		600,898		764,773		804,197		1,109,236		1,266,035		1,343,446		1,827,593
Treatment – TSS		176,558		439,998		457,551		589,257		610,584		808,175		903,516		945,857		1,389,817
Total		1,522,775		3,822,914		3,993,818		5,122,460		5,335,185		7,165,933		8,071,664		8,491,998		12,023,724
Collection/Customer																		
Collection		588,174		620,727		662,800		709,900		763,794		820,602		885,381		950,556		1,096,040
Customer		66,734		77,254		82,900		89,005		96,159		103,642		112,310		131,070		140,761
Total		654,908		697,981		745,700		798,906		859,953		924,244		997,690		1,155,611		1,236,801
Total	\$	2,177,683	\$	4,520,895	\$	4,739,518	\$	5,921,366	\$	6,195,138	\$	8,090,177	\$	8,416,061	\$	9,143,229	\$	13,260,525

COST OF SERVICE CALCULATION – TOTAL SYSTEM

Units of Measurement

Treatment – Volume	Gallons	2,148,931,406	2,170,844,572	2,232,210,789	2,292,860,732	2,380,940,115	2,449,511,353	2,546,543,384	2,615,498,622	2,708,114,653	2,777,261,891
Treatment – BOD	lbs	5,376,626	5,431,453	5,584,991	5,736,738	5,957,112	6,128,677	6,371,452	6,543,878	6,775,703	6,948,709
Treatment – TSS	lbs	5,376,626	5,431,453	5,584,991	5,736,738	5,957,112	6,128,677	6,371,452	6,543,878	6,775,703	6,948,709
Collection	Gallons	2,148,931,406	2,170,844,572	2,232,210,789	2,292,860,732	2,380,940,115	2,449,511,353	2,546,543,384	2,615,498,622	2,708,114,653	2,777,261,891
Customer	Bills	172,572	174,528	178,320	184,596	190,944	197,340	204,372	210,816	217,296	223,764

Cost Per Unit

Treatment – Volume	\$	0.52	\$	1.30	\$	1.32	\$	1.64	\$	1.65	\$	2.14	\$	2.13	\$	2.26	\$	2.29	\$	3.18
Treatment – BOD		0.04		0.10		0.11		0.13		0.13		0.18		0.18		0.19		0.20		0.26
Treatment – TSS		0.03		0.08		0.08		0.10		0.10		0.13		0.13		0.14		0.14		0.20
Collection		0.27		0.29		0.30		0.32		0.32		0.34		0.35		0.36		0.38		0.39
Customer		0.39		0.44		0.46		0.48		0.50		0.53		0.55		0.57		0.60		0.63

Industrial

Units of Measurement

Treatment – Volume	Gallons	234,687,924	234,687,924	258,156,716	258,156,716	281,625,509	281,625,509	305,094,301	305,094,301	328,563,094	328,563,094
Treatment – BOD	lbs	587,189	587,189	645,908	645,908	704,627	704,627	763,346	763,346	822,065	822,065
Treatment – TSS	lbs	587,189	587,189	645,908	645,908	704,627	704,627	763,346	763,346	822,065	822,065
Collection	Gallons	234,687,924	234,687,924	258,156,716	258,156,716	281,625,509	281,625,509	305,094,301	305,094,301	328,563,094	328,563,094
Customer	Bills	120	120	132	132	144	144	156	156	168	168

Total Cost

Treatment – Volume	\$	122,563	\$	304,082	\$	339,484	\$	424,283	\$	463,718	\$	603,434	\$	650,073	\$	688,473	\$	752,544	\$	1,044,194
Treatment – BOD		24,459		61,642		69,487		86,107		95,123		127,531		136,084		147,681		162,994		216,213
Treatment – TSS		19,282		47,568		52,916		66,345		72,222		82,918		89,618		105,394		114,757		162,056
Total		166,304		413,292		461,888		576,746		631,063		823,883		888,774		941,548		1,030,295		1,422,463

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

Test Year Forecast
2010 2011

2019

2018

2017

2016

2015

2014

2013

2012

Forecast WW 7.0 – Wastewater Service Cost Functionalization by Customer Class

Scenario: Alternative 1

Collection/Customer

Collection	64,235	67,106	76,653	79,929	90,344	94,346	106,075	110,881	124,303	129,667
Customer	46	53	61	64	73	76	86	90	101	106
Total	64,282	67,159	76,715	79,992	90,417	94,422	106,161	110,971	124,404	129,772
Total	\$ 230,596	\$ 480,451	\$ 538,602	\$ 656,738	\$ 721,480	\$ 918,304	\$ 994,935	\$ 1,052,519	\$ 1,154,699	\$ 1,552,235
Billing Units	234,687,924	234,687,924	258,156,716	258,156,716	281,625,509	281,625,509	305,094,301	305,094,301	328,563,094	328,563,094
Rate Per 1,000 Gallons	\$ 0.98	\$ 2.06	\$ 2.09	\$ 2.54	\$ 2.56	\$ 3.26	\$ 3.26	\$ 3.45	\$ 3.51	\$ 4.72

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL											
Test Year	Forecast	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019

Forecast WW 7.0 – Wastewater Service Cost Functionalization by Customer Class

Scenario: Alternative 1

COST OF SERVICE CALCULATIONNot Revenue Requirement

Treatment											
Treatment – Volume	\$ 999,689	\$ 998,689	\$ 2,508,649	\$ 2,565,945	\$ 3,344,137	\$ 3,456,686	\$ 4,645,088	\$ 4,775,919	\$ 5,213,640	\$ 5,450,150	\$ 7,782,119
Treatment – BOD	199,505	198,505	508,544	531,351	678,666	709,074	981,705	1,021,811	1,118,353	1,180,452	1,611,380
Treatment – TSS	157,276	157,276	392,430	404,635	522,912	538,362	715,258	731,866	798,122	831,101	1,207,761
Total	1,356,470	1,356,470	3,409,623	3,531,931	4,545,715	4,704,122	6,342,051	6,529,596	7,130,115	7,481,703	10,601,261
Collection/Customer											
Collection	523,939	523,939	553,621	586,147	629,972	673,450	726,256	779,306	839,675	900,239	966,373
Customer	66,688	66,688	77,201	82,839	88,942	96,086	103,566	112,224	120,919	130,968	140,656
Total	590,626	590,626	630,822	668,985	718,913	769,536	829,822	891,529	960,594	1,031,207	1,107,029
Total	\$ 1,947,097	\$ 1,947,097	\$ 4,040,444	\$ 4,200,916	\$ 5,264,628	\$ 5,473,658	\$ 7,171,872	\$ 7,421,126	\$ 8,090,710	\$ 8,492,910	\$ 11,708,289

Units of Measurement

Treatment – Volume	1,914,243,482	1,936,156,648	1,974,054,072	2,034,704,015	2,085,314,606	2,167,885,844	2,241,449,083	2,310,404,321	2,379,551,560	2,448,686,798
Treatment – BOD	4,789,437	4,844,264	4,939,083	5,090,829	5,252,485	5,424,050	5,608,106	5,780,632	5,953,638	6,126,644
Treatment – TSS	4,789,437	4,844,264	4,939,083	5,090,829	5,252,485	5,424,050	5,608,106	5,780,632	5,953,638	6,126,644
Collection	1,914,243,482	1,936,156,648	1,974,054,072	2,034,704,015	2,085,314,606	2,167,885,844	2,241,449,083	2,310,404,321	2,379,551,560	2,448,686,798
Customer	172,452	174,408	176,188	184,464	190,800	197,196	204,216	210,660	217,128	223,596

Cost Per Unit

Treatment – Volume	\$ 0.52	\$ 1.30	\$ 1.32	\$ 1.64	\$ 1.65	\$ 2.14	\$ 2.13	\$ 2.26	\$ 2.29	\$ 3.18
Treatment – BOD	0.04	0.10	0.11	0.13	0.13	0.18	0.18	0.19	0.20	0.26
Treatment – TSS	0.03	0.08	0.08	0.10	0.10	0.13	0.13	0.14	0.14	0.20
Collection	0.27	0.29	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39
Customer	0.39	0.44	0.46	0.48	0.50	0.53	0.55	0.57	0.60	0.63

Residual

Units of Measurement										
Treatment – Volume	1,914,243,482	1,307,328,000	1,336,128,000	1,394,128,000	1,432,128,000	1,480,128,000	1,532,928,000	1,580,928,000	1,628,928,000	1,676,928,000
Treatment – BOD	3,234,906	3,270,935	3,342,892	3,463,088	3,563,184	3,703,280	3,835,386	3,955,482	4,075,578	4,195,674
Treatment – TSS	3,234,906	3,270,935	3,342,892	3,463,088	3,563,184	3,703,280	3,835,386	3,955,482	4,075,578	4,195,674
Collection	1,292,928,000	1,307,328,000	1,336,128,000	1,394,128,000	1,432,128,000	1,480,128,000	1,532,928,000	1,580,928,000	1,628,928,000	1,676,928,000
Customer	161,616	163,416	167,016	173,016	179,016	185,016	191,616	197,616	203,616	209,616

Total Cost

Treatment										
Treatment – Volume	\$ 675,215	\$ 1,693,885	\$ 1,757,952	\$ 2,274,883	\$ 2,358,111	\$ 3,171,442	\$ 3,266,253	\$ 3,567,509	\$ 3,730,914	\$ 5,329,383
Treatment – BOD	134,751	343,378	359,642	461,669	483,722	670,261	698,817	765,250	808,081	1,103,512
Treatment – TSS	106,228	264,976	273,875	355,716	367,264	498,343	500,524	546,127	568,932	827,104
Total	916,194	2,302,239	2,390,568	3,092,268	3,209,097	4,330,047	4,465,594	4,878,886	5,107,927	7,259,999

Collection/Customer

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

Forecast WW 7.0 – Wastewater Service Cost Functionalization by Customer Class
Scenario: Alternative 1

	Test Year 2010	Forecast 2011	2012	2013	2014	2015	2016	2017	2018	2019
Collection	353,881	373,815	396,730	428,545	459,420	495,852	532,967	574,580	616,261	661,796
Customer	82,497	72,335	77,645	83,422	90,152	97,169	105,300	113,432	122,818	131,861
Total	416,379	446,150	474,375	511,966	549,572	593,021	638,267	687,992	739,079	793,657
Total	\$ 1,332,573	\$ 2,748,389	\$ 2,864,943	\$ 3,604,235	\$ 3,758,689	\$ 4,923,068	\$ 5,103,861	\$ 5,566,878	\$ 5,847,006	\$ 8,053,656
Billing Units	1,292,928,000	1,307,328,000	1,336,128,000	1,384,128,000	1,432,128,000	1,480,128,000	1,532,928,000	1,580,928,000	1,628,928,000	1,676,928,000
Rate Per 1,000 Gallons	\$ 1.03	\$ 2.10	\$ 2.14	\$ 2.60	\$ 2.62	\$ 3.33	\$ 3.33	\$ 3.52	\$ 3.59	\$ 4.80



CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL										
Test Year	Forecast	2011	2012	2013	2014	2015	2016	2017	2018	2019

Forecast WW 7.0 – Wastewater Service Cost Functionalization by Customer Class
Scenario: Alternative 1

Resid - Out

Units of Measurement	Gallons									
Treatment – Volume	12,960,000	13,344,000	13,728,000	14,496,000	15,264,000	16,032,000	16,992,000	18,144,000	19,488,000	20,832,000
Treatment – BOD	32,426	33,387	34,347	36,269	38,191	40,112	42,514	45,396	48,759	52,122
Treatment – TSS	32,426	33,387	34,347	36,269	38,191	40,112	42,514	45,396	48,759	52,122
Collection	12,960,000	13,344,000	13,728,000	14,496,000	15,264,000	16,032,000	16,992,000	18,144,000	19,488,000	20,832,000
Customer	1,620	1,668	1,716	1,812	1,908	2,004	2,124	2,268	2,436	2,604
Total Cost										
Treatment										
Treatment – Volume	\$ 5,768	\$ 17,290	\$ 18,053	\$ 23,825	\$ 25,133	\$ 34,351	\$ 36,205	\$ 40,944	\$ 44,636	\$ 66,205
Treatment – BOD	1,351	3,905	3,695	4,635	5,156	7,260	7,746	8,783	9,668	13,709
Treatment – TSS	1,065	2,705	2,814	3,725	3,914	5,289	5,548	6,268	6,807	10,275
Total	9,184	23,499	24,562	32,385	34,203	46,901	49,500	55,994	61,110	90,189
Collection/Customer										
Collection	3,547	3,816	4,076	4,488	4,897	5,371	5,908	6,594	7,373	8,221
Customer	626	738	798	874	961	1,052	1,167	1,302	1,468	1,638
Total	4,174	4,554	4,874	5,362	5,857	6,423	7,075	7,896	8,842	9,859
Total	\$ 13,357	\$ 28,053	\$ 29,436	\$ 37,747	\$ 40,061	\$ 53,324	\$ 56,575	\$ 63,890	\$ 69,952	\$ 100,048
Billing Units	12,960,000	13,344,000	13,728,000	14,496,000	15,264,000	16,032,000	16,992,000	18,144,000	19,488,000	20,832,000
Rate Per 1,000 Gallons	\$ 1.03	\$ 2.10	\$ 2.14	\$ 2.60	\$ 2.62	\$ 3.33	\$ 3.33	\$ 3.52	\$ 3.59	\$ 4.80

Commercial

Units of Measurement	Gallons									
Treatment – Volume	608,355,482	615,484,648	624,198,072	636,080,015	651,822,606	671,725,844	691,528,083	711,332,321	731,135,560	750,938,798
Treatment – BOD	1,522,105	1,539,943	1,561,744	1,591,472	1,631,110	1,680,658	1,730,206	1,779,753	1,829,301	1,878,849
Treatment – TSS	1,522,105	1,539,943	1,561,744	1,591,472	1,631,110	1,680,658	1,730,206	1,779,753	1,829,301	1,878,849
Collection	608,355,482	615,484,648	624,198,072	636,080,015	651,822,606	671,725,844	691,528,083	711,332,321	731,135,560	750,938,798
Customer	9,216	9,324	9,456	9,636	9,876	10,176	10,476	10,776	11,076	11,376
Total Cost										
Treatment										
Treatment – Volume	\$ 317,706	\$ 787,474	\$ 820,841	\$ 1,045,429	\$ 1,073,442	\$ 1,439,294	\$ 1,473,461	\$ 1,605,187	\$ 1,674,601	\$ 2,386,531
Treatment – BOD	63,404	161,661	168,014	212,161	220,196	304,184	315,248	344,321	362,703	494,160
Treatment – TSS	49,893	124,750	127,946	163,470	167,183	221,625	228,795	245,728	255,362	370,382
Total	431,093	1,083,885	1,116,800	1,421,061	1,460,821	1,965,103	2,014,503	2,195,235	2,292,666	3,251,073
Collection/Customer										
Collection	166,510	175,950	185,340	196,939	209,134	225,032	240,430	258,521	276,605	296,356
Customer	3,564	4,127	4,396	4,646	4,974	5,344	5,757	6,185	6,681	7,156
Total	170,074	180,118	189,736	201,595	214,107	230,377	246,187	264,707	283,286	303,512

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL										
Test Year 2010	Forecast 2011	2012	2013	2014	2015	2016	2017	2018	2019	

Forecast WW 7.0 -- Wastewater Service Cost Functionalization by Customer Class
Scenario: Alternative 1

Total	\$	601,167	\$	1,264,002	\$	1,306,537	\$	1,622,646	\$	1,674,928	\$	2,195,480	\$	2,260,690	\$	2,459,942	\$	2,575,952	\$	3,554,585
Billing Units		608,355,482		615,484,648		624,198,072		636,080,015		651,922,606		671,725,844		691,529,083		711,332,321		731,135,560		750,938,798
Rate Per 1,000 Gallons	\$	0.99	\$	2.06	\$	2.09	\$	2.65	\$	2.57	\$	3.27	\$	3.27	\$	3.46	\$	3.52	\$	4.73

Test Year
2010

CITY OF CASA GRANDE

WASTEWATER COST OF SERVICE MODEL

Input Area -- Volume and Customer Data
Scenario: Alternative 1

WASTEWATER Volume Data

1 Wastewater Accounts

1A Wastewater Active Accounts
Mar-09

Test Year New Accounts

Test Year Accounts

1B Forecast New WW Accounts

2011
2012
2013
2014
2015
2016
2017
2018
2019

1C Forecast Annual Total WW Accounts

2011
2012
2013
2014
2015
2016
2017
2018
2019

1	2	3	4	0	0	0	Total
Resid - In	Resid - Out	Commercial	Industrial	Other	Other	Other	
13,318	131	759	10	-	-	-	14,218
150	4	9	-	-	-	-	163
13,468	135	768	10	-	-	-	14,381
150	4	9	-	-	-	-	163
300	4	11	1	-	-	-	316
500	8	15	-	-	-	-	523
500	8	20	1	-	-	-	529
500	8	25	-	-	-	-	533
550	10	25	1	-	-	-	586
500	12	25	-	-	-	-	537
500	14	25	1	-	-	-	540
500	14	25	-	-	-	-	539
13,618	139	777	10	-	-	-	14,544
13,918	143	788	11	-	-	-	14,860
14,418	151	803	11	-	-	-	15,383
14,918	159	823	12	-	-	-	15,912
15,418	167	848	12	-	-	-	16,445
15,968	177	873	13	-	-	-	17,031
16,468	189	898	13	-	-	-	17,568
16,968	203	923	14	-	-	-	18,108
17,468	217	948	14	-	-	-	18,647



CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

<u>Test Year</u>	2010
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Input Area ... Volume and Customer Data
Scenario: Alternative 1

1D	Forecast Annual WW Account Growth																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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2 Wastewater Billing Units

AZ Water Company Data for Water Usage									
2A	Test Year Billing Units								
	Estimated Winter Average Usage	8,000	8,000	8,000					
	Jan-08	31	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Feb-08	29	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Mar-08	31	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Apr-08	30	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	May-08	31	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Jun-08	30	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Jul-08	31	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Aug-08	31	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Sep-08	30	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Oct-08	31	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Nov-08	30	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Dec-08	31	106,544,000	1,048,000	50,102,193	19,557,327	-	-	177,251,520
	Test Year Wastewater Billing Units		1,278,528,000	12,576,000	601,226,316	234,687,924	-	-	2,127,018,240
	Test Year Percent Increase		1.13%	3.05%	1.19%	0.00%	0.00%	0.00%	
	Test Year Billing Units		1,292,928,000	12,960,000	608,355,482	234,687,924	-	-	2,148,931,406

2B	Calculation of Total WW Plant Flows	10.0%
	I/I Percentage	
	Test Year WW Flow	
	Test Year MGD	

Test Year
2010

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

Input Area -- Volume and Customer Data
Scenario: Alternative 1

2C Forecast Wastewater Billing Units Growth										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	
	1.11%	2.96%	1.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.13%
	2.20%	2.88%	1.42%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.17%
	3.59%	5.59%	1.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.52%
	3.47%	5.30%	2.49%	9.09%	0.00%	0.00%	0.00%	0.00%	0.00%	3.44%
	3.35%	5.03%	3.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.35%
	3.57%	5.95%	2.95%	8.33%	0.00%	0.00%	0.00%	0.00%	0.00%	3.56%
	3.13%	6.78%	2.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.15%
	3.04%	7.41%	2.78%	7.59%	0.00%	0.00%	0.00%	0.00%	0.00%	3.07%
	2.95%	6.90%	2.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.98%
2D Forecast Wastewater Consumption	2011	1,307,328,000	13,344,000	615,484,848	234,687,924	-	-	-	-	2,170,844,572
	2012	1,335,128,000	13,728,000	624,198,072	258,156,716	-	-	-	-	2,232,210,789
	2013	1,384,128,000	14,496,000	636,080,015	258,156,716	-	-	-	-	2,292,860,732
	2014	1,432,128,000	15,264,000	651,922,606	281,625,509	-	-	-	-	2,380,940,115
	2015	1,480,128,000	16,032,000	671,725,844	281,625,509	-	-	-	-	2,449,511,353
	2016	1,532,928,000	16,992,000	691,529,083	305,094,301	-	-	-	-	2,546,543,384
	2017	1,580,928,000	18,144,000	711,332,321	305,094,301	-	-	-	-	2,615,498,622
	2018	1,628,928,000	19,488,000	731,135,560	328,563,094	-	-	-	-	2,708,114,653
	2019	1,676,928,000	20,832,000	750,938,798	328,563,094	-	-	-	-	2,777,261,891
	2010	-	-	-	-	-	-	-	-	-
2E Monthly Minimum Wastewater Volume		-	-	-	-	-	-	-	-	-

3 Wastewater Strength Cost Components

	1		2		3		4		0		0	
	Resid - In		Resid - Out		Commercial		Industrial		Other		Other	
Customer Class Loading Factor -- Domestic Strength												
BOD Loading Factor	na	na	na	na	na	na	300	300	-	-	-	-
TSS Loading Factor	na	na	na	na	na	na	300	300	-	-	-	-
Plant Loading Factor												
BOD Loading Factor												
TSS Loading Factor												

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10 Year Forecast 2010 - 2019		CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL																	
		Allocation Percentages:										Cust							
		Treatment										Collection Admin Billing							
		Total Budget	Adjustment	Net Budget	Total Volume	BOD	TSS	Collection	Admin	Billing	2011	2012	2013	2014	2015	2016	2017	2018	2019

Input Area – Wastewater Operating Costs and Transfer
Scenario: Alternative 1

UTILITY:
Test Year: 2010
Forecast Period: 2010 - 2019
Scenario: Alternative 1

CONTRACTUAL SERVICES		153,300	-	153,300	100.0%	34.0%	33.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2210-00	Professional Services	153,300	-	153,300	100.0%	90.0%	5.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2215-00	Contractual Services	153,300	-	153,300	100.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
520-35-451-2220-50	Communication and Equipment Contractual	700	-	700	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-2220-70	Other Equipment	43,800	-	43,800	100.0%	34.0%	33.0%	0.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-2225-00	City Vehicle	30,330	-	30,330	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-2230-00	Rentals and Leases	700	-	700	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-2230-00	Dues and Memberships	400	-	400	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2240-00	Insurance Charges	40,250	-	40,250	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2240-00	Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Contractual Services		422,700	-	422,700	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
OPERATING SUPPLIES		7,300	-	7,300	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-3305-00	Office Supplies	7,300	-	7,300	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-3330-00	Chemical and Supply	65,700	134,300	200,000	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	5.8%	5.7%	6.8%	5.9%	7.0%	7.0%	6.5%	5.9%
520-35-451-3350-00	Clothing and Uniforms	6,200	-	6,200	100.0%	55.0%	10.0%	0.0%	0.0%	0.0%	11.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-3355-00	Printing and Duplication	900	-	900	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-3360-00	Maintenance Supplies	14,600	-	14,600	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	5.8%	5.7%	6.8%	5.9%	7.0%	7.0%	6.5%	5.9%
520-35-451-3360-00	Sewer Materials	13,900	-	13,900	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	5.8%	5.7%	6.8%	5.9%	7.0%	7.0%	6.5%	5.9%
520-35-451-3360-00	Gasoline	27,270	-	27,270	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	10.8%	10.7%	11.8%	10.9%	12.0%	10.7%	11.5%	10.6%
520-35-451-3365-10	Diesel	15,130	-	15,130	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	10.8%	10.7%	11.8%	10.9%	12.0%	10.7%	11.5%	10.6%
520-35-451-3365-20	Propane	600	-	600	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	10.8%	10.7%	11.8%	10.9%	12.0%	10.7%	11.5%	10.6%
520-35-451-3365-40	Lubricants	1,900	-	1,900	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	5.8%	5.7%	6.8%	5.9%	7.0%	7.0%	6.5%	5.9%
520-35-451-3370-00	Small Tools	5,500	-	5,500	100.0%	80.0%	10.0%	0.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-3370-00	Freight Express & Freight	11,700	-	11,700	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-3385-00	Electric	500,300	-	500,300	100.0%	50.0%	50.0%	0.0%	0.0%	0.0%	50.0%	10.8%	10.7%	11.8%	10.9%	12.0%	10.7%	11.5%	10.6%
520-35-451-3390-00	Water	1,600	-	1,600	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	5.8%	5.7%	6.8%	5.9%	7.0%	7.0%	6.5%	5.9%
520-35-451-3390-00	Telephone	13,840	-	13,840	100.0%	80.0%	10.0%	0.0%	0.0%	0.0%	4.0%	5.8%	5.7%	6.8%	5.9%	7.0%	7.0%	6.5%	5.9%
520-35-451-4310-00	Facility Replacement	30,000	(30,000)	-	100.0%	80.0%	10.0%	0.0%	0.0%	0.0%	4.0%	5.8%	5.7%	6.8%	5.9%	7.0%	7.0%	6.5%	5.9%
520-35-451-4610-00	Vehicles	95,000	(95,000)	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-4610-00	Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Operating Supplies		811,140	9,300	820,440	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

10 Year Forecast 2010 - 2019	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL																								
	Allocation Percentages:												Cust												
	Total Budget	Adjustment	Net Budget	Treatment									Collection			Admin			Billing						
				Total	Volume	BOD	TSS																		

Input Area - Wastewater Operating Costs and Transfer
Scenario: Alternative 1

UTILITY:
Tost Year: 2010
Forecast Period: 2010 - 2019
Scenario: Alternative 1

OTHER USES

Expense	-	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Expense	-	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Expense	-	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Expense	-	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Expense	-	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

Total Other Charges

Total WW Operating Exp - TREATMENT \$ 1,915,660 \$ 9,300 \$ 1,924,960

TRANSFERS

520-99-880-9101-00	Operating Transfers	201,910	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.3%	6.2%	6.1%	6.0%
	Transfer	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
	Transfer	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
	Transfer	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
	Transfer	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

Total Transfers

Operating Exp and Transfers - Treatment \$ 2,117,570 \$ 9,300 \$ 2,126,870

WW COLLECTION EXPENSE

PERSONNEL SERVICES		\$	116,200	-	\$	116,200	100.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
520-35-451-1101-00		Permanent Wages and Salaries	2,200	-	2,200	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
520-35-451-1110-00		Overtime	8,900	-	8,900	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
520-35-451-1205-00		Social Security Taxes	10,920	-	10,920	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	
520-35-451-1210-00		Pension and Retirement	20,730	-	20,730	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	
520-35-451-1215-00		Employee Insurance	6,400	-	6,400	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	
520-35-451-1220-00		Worker's Compensation Insurance	7,300	-	7,300	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	
520-35-451-1240-00		Training	1,000	-	1,000	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
520-35-451-1245-00		Conferences	1,000	-	1,000	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
520-35-451-1520-00		Travel and Meetings	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		Expense	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%			

10 Year Forecast 2010 - 2019	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL											Allocation Percentages:										
	Total Budget	Adjustments	Net Budget	Treatment								Cust										
				Volume	BOD	TSS	Collection	Admin	Billing	2011	2012	2013	2014	2015	2016	2017	2018	2019				

Input Area -- Wastewater Operating Costs and Transfer
Scenario: Alternative 1

UTILITY:
Test Year: 2010
Forecast Period: 2010 - 2019
Scenario: Alternative 1

CONTRACTUAL SERVICES		56,700	-	-	56,700	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2210-00	Professional Services	56,700	-	-	56,700	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2215-00	Contractual Services	56,700	-	-	56,700	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2220-50	Communication and Equipment Contractual	300	-	-	300	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-2220-70	Other Equipment	16,200	-	-	16,200	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-2225-00	City Vehicle	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-2230-00	Rentals and Leases	300	-	-	300	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-2230-00	Dues and Memberships	200	-	-	200	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2240-00	Insurance Charges	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-2240-00	Expense	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Contractual Services		130,400	-	-	130,400	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
OPERATING SUPPLIES		2,700	-	-	2,700	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-3305-00	Office Supplies	2,700	-	-	2,700	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-3305-00	Chemical and Supply	24,300	-	-	24,300	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.0%	5.8%	7.0%	6.8%	5.9%	7.0%	5.7%	5.0%	5.9%
520-35-451-3350-00	Clothing and Uniforms	2,300	-	-	2,300	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-3355-00	Printing and Duplication	300	-	-	300	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.0%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-3360-00	Maintenance Supplies	5,400	-	-	5,400	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.0%	5.8%	7.0%	6.8%	5.9%	7.0%	5.7%	5.0%	5.9%
520-35-451-3360-00	Materials	5,100	-	-	5,100	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.0%	5.8%	7.0%	6.8%	5.9%	7.0%	5.7%	5.0%	5.9%
520-35-451-3360-00	Sewer Materials	13,500	-	-	13,500	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	9.0%	10.8%	10.7%	11.8%	10.8%	12.0%	10.7%	11.5%	10.8%
520-35-451-3365-10	Gasoline	17,000	-	-	17,000	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	9.0%	10.8%	10.7%	11.8%	10.8%	12.0%	10.7%	11.5%	10.8%
520-35-451-3365-20	Diesel	200	-	-	200	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	9.0%	10.8%	10.7%	11.8%	10.8%	12.0%	10.7%	11.5%	10.8%
520-35-451-3365-50	Propane	700	-	-	700	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	9.0%	10.8%	10.7%	11.8%	10.8%	12.0%	10.7%	11.5%	10.8%
520-35-451-3365-50	Lubricants	2,000	-	-	2,000	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.0%	5.8%	7.0%	6.8%	5.9%	7.0%	5.7%	5.0%	5.9%
520-35-451-3370-00	Small Tools	4,300	-	-	4,300	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-35-451-3385-00	Postage Express & Freight	128,800	-	-	128,800	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	9.0%	10.8%	10.7%	11.8%	10.8%	12.0%	10.7%	11.5%	10.8%
520-35-451-3390-10	Electric	600	-	-	600	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.0%	5.8%	7.0%	6.8%	5.9%	7.0%	5.7%	5.0%	5.9%
520-35-451-3390-30	Water	3,200	-	-	3,200	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.0%	5.8%	7.0%	6.8%	5.9%	7.0%	5.7%	5.0%	5.9%
520-35-451-3390-50	Telephone	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.0%	5.8%	7.0%	6.8%	5.9%	7.0%	5.7%	5.0%	5.9%
520-35-451-4310-00	Facility Replacement	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-4310-00	Expense	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-451-4310-00	Expense	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Operating Supplies		210,400	-	-	210,400	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

OTHER USES		250,000	(250,000)	-	250,000	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-455-4310-00	Sewer Facilities-Manhole Rehab	250,000	(250,000)	-	250,000	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-455-4310-00	Expense	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-455-4310-00	Expense	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-455-4310-00	Expense	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-35-455-4310-00	Expense	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Other Charges		250,000	(250,000)	-	250,000	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

Total WW Operating Exp - Collection \$ 765,540 \$ (250,000) \$ 515,540

TRANSFERS

520-99-890-9101-00	Operating Transfers	123,760	-	-	123,760	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	4.1%	5.2%	6.5%	6.4%	6.3%	6.6%	6.2%	6.1%	6.0%
520-99-890-9101-00	Transfer	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-99-890-9101-00	Transfer	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
520-99-890-9101-00	Transfer	-	-	-	-	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

10 Year Forecast 2010 - 2019		CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL											
		Allocation Percentages:											
		Treatment											
		Cust											
		Collection Admin Billing											
		2011 2012 2013 2014 2015 2016 2017 2018 2019											
		100.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%											
		Total Volume BOD TSS											
		Total Budget Adjustment Budget Net											
		123,760 - - 123,760											

Input Area - Wastewater Operating Costs and Transfer
Scenario: Alternative 1

UTILITY:
Test Year: 2010
Forecast Period: 2010 - 2019
Scenario: Alternative 1

Total Transfers		100.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%											
Transfer		-											
Operating Exp and Transfers - Collection		889,300 \$ (250,000) \$ 639,300											
TOTAL WW TREATMENT EXPENSE		\$ 1,915,660 \$ 9,300 \$ 1,924,960											
TOTAL WW COLLECTION EXPENSE		\$ 765,540 \$ (250,000) \$ 515,540											
TRANSFERS - TREATMENT		\$ 201,910 - \$ 201,910											
TRANSFERS - COLLECTION		\$ 123,760 - \$ 123,760											
		\$ 3,008,870 \$ (240,700) \$ 2,768,170											

10 Year Forecast 2010 - 2019

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Input Area -- Capital Outlays

Scenario: Alternative 1

1 Accelerators

Inflation Rate

Expense Increase Premium

Total New Wastewater Accounts

3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
163	316	523	529	533	586	537	540	539	539

2 Wastewater Capital Outlays

2A Treatment -- Volume

Capital Outlay

Capital Outlay

Capital Outlay

Total

\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
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2B Treatment -- BOD

Capital Outlay

Capital Outlay

Capital Outlay

Total

\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-	-	-	-	-	-	-	-	-	-
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\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

2C Treatment -- TSS

Capital Outlay

Capital Outlay

Capital Outlay

Total

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-	-	-	-	-	-	-	-	-	-
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\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

10 Year Forecast
2010 - 2019

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

2019

2018

2017

2016

2015

2014

2013

2012

2011

2010

Input Area -- Capital Outlays

Scenario: Alternative 1

1 Accelerators

Inflation Rate

Expense Increase Premium

3.0%
5.0%3.0%
5.0%3.0%
5.0%3.0%
5.0%3.0%
5.0%3.0%
5.0%3.0%
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5.0%3.0%
5.0%3.0%
5.0%

Total New Wastewater Accounts

163

523

529

533

586

537

540

539

2D Collection

Capital Outlay

Capital Outlay

Capital Outlay

Sub-Total

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Capital Outlay

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Total Capital Outlays

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CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

Scenario:

Received 15 November 2005; accepted 12 January 2006
Published online 12 February 2006 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/anie.200526211

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economists.com

10 Year Forecast
2010CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
--	------	------	------	------	------	------	------	------	------	------

Total CIP	Prior Funded	Unfunded CIP
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Input Area -- CIP FUNDING ASSUMPTIONS

Scenario:

Alternative 1

2. Impact Fee Input

Accelerators										
Wastewater										
Fee Per 5/8" - 3/4" Connection										
Impact Fee -- Wastewater	4,202	4,412	4,633	4,864	5,108	5,363	5,631	5,913	6,208	6,519
Fee Per 1" Connection										
Impact Fee -- Wastewater	7,059	7,412	7,783	8,172	8,580	9,009	9,460	9,933	10,429	10,951
Fee Per 1 1/2" Connection										
Impact Fee -- Wastewater	13,604	14,284	14,998	15,748	16,536	17,363	18,231	19,142	20,099	21,104
Fee Per 2" Connection										
Impact Fee -- Wastewater	21,683	22,767	23,906	25,101	26,356	27,674	29,057	30,510	32,036	33,637
Fee Per 3" Connection										
Impact Fee -- Wastewater	43,702	45,887	48,181	50,591	53,120	55,776	58,565	61,493	64,568	67,796
Fee Per 4" Connection										
Impact Fee -- Wastewater	69,545	73,022	76,673	80,507	84,532	88,759	93,197	97,857	102,750	107,887
Wastewater -- New Accounts	163	163	316	523	529	533	586	537	540	539
Total Impact/Connection Fee Revenue										
Wastewater Treatment	16,289,950	459,900	980,836	1,704,513	1,810,272	1,915,158	2,210,875	2,127,307	2,246,151	2,354,091
Wastewater Collection	8,023,408	225,026	483,098	839,536	891,626	943,287	1,088,939	1,047,778	1,106,313	1,159,478
Total	\$ 24,313,358	\$ 684,926	\$ 1,463,935	\$ 2,544,050	\$ 2,701,898	\$ 2,858,444	\$ 3,299,814	\$ 3,175,086	\$ 3,352,465	\$ 3,513,569

10 Year Forecast
2010

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

[illegible]

Input Area -- CIP FUNDING ASSUMPTIONS

Scenario:

3 CIP Funding Summary

[illegible]

10 Year Forecast 2008-2017

WASTEWATER COST OF SERVICE MODEL

Input Area

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Input Area -- Future Debt Service Scenario:

Alternative 1

Debt Financing Variables
 Issuing Cost Percentage 2.0%
 Interest Rate 4.0%
 Term (Years) 25
 Reserve Years Funded 5

Wastewater Allocation Percentages

Treatment -- Volume 75.0%
 Treatment -- BOD 12.5%
 Treatment -- TSS 12.5%
 Collection 0.0%
 Administration 0.0%
 Customer 9.0%
 Total 100.0%

Debt Issues

Wastewater 53,000,000
 Total 53,000,000

Series: 2010

Principal \$ -
 Issuing Costs -
 Total Debt -

Interest Rate 4.0%
 Term 25
 P&I -

P&I
 Reserve
 Total

Wastewater Allocation Percentages

Treatment -- Volume 75.0%
 Treatment -- BOD 12.5%
 Treatment -- TSS 12.5%
 Collection 0.0%
 Administration 0.0%
 Customer 9.0%
 Total 100.0%

53,000,000 12,000,000 12,000,000 - - - - - 41,000,000 -

53,000,000 12,000,000 12,000,000 - - - - - 41,000,000 -

1 2 3 4 5 6 7 8 9
 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

75.0% 75.0% 75.0% 75.0% 75.0% 75.0% 75.0% 75.0% 75.0%
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 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0%
 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0%

10 Year Forecast 2008-2017

Input
Area

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL

1 2011
2 2012
3 2013
4 2014
5 2015
6 2016
7 2017
8 2018
9 2019

Input Area - Future Debt Service

Scenario:

Alternative 1

Series:

2011

Principal	\$ -
Issuing Costs	-
Total Debt	-
Interest Rate	4.0%
Term	25
P&I	-
P&I	-
Reserve	-
Total	-

Wastewater Allocation Percentages

	1	2	3	4	5	6	7	8
Treatment - Volume	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Treatment - BOD	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Treatment - TSS	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Series:

2012

Principal	\$ 12,000,000
Issuing Costs	240,000
Total Debt	12,240,000
Interest Rate	4.0%
Term	25
P&I	785,910
P&I	-
Reserve	-
Total	-

Wastewater Allocation Percentages

	1	2	3	4	5	6	7
Treatment - Volume	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Treatment - BOD	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Treatment - TSS	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

	1	2	3	4	5	6	7
\$	785,910	785,910	785,910	785,910	785,910	785,910	785,910
\$	157,182	157,182	157,182	157,182	157,182	157,182	157,182
\$	943,092	943,092	943,092	943,092	943,092	943,092	943,092

2008-2017

Input Area

Input Area – Future Debt Service

Alternative 1

Series:

2013

Principal	-	
Issuuing Costs	-	
Total Debt	-	
Interest Rate	4.0%	
Term	25	
P&I	-	
P&I		
Reserve		
Total		

Wastewater Allocation Percentages

	Volume	Weight	Value	Count
Treatment – Volume	75.0%	75.0%	75.0%	75.0%
Treatment – BOD	12.5%	12.5%	12.5%	12.5%
Treatment – TSS	12.5%	12.5%	12.5%	12.5%
Collection	0.0%	0.0%	0.0%	0.0%
Administration	0.0%	0.0%	0.0%	0.0%
Customer	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

Series:

2018

Principal	-	\$
Issuing Costs	-	
Total Debt	-	
Interest Rate	4.0%	
Term	25	
P&I	-	
P&I		
Reserve		
Total		

Wastewater Allocation Percentages

Location	Volume	Weight	Value	Percentage of Volume	Percentage of Weight	Percentage of Value
Treatment – Volume	12.5%	12.5%	75.0%	75.0%	75.0%	75.0%
Treatment – BOO	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Treatment – TSS	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

19

Alternative 1

Scenario:

2015

Principal	-	-
Assuring Costs	-	-
Total Debt	-	-
Interest Rate	4.0%	
Term	25	
P&I	-	-
P&I Reserve		
Total		

Treatment -- Volume	
Treatment -- BOD	
Treatment -- TSS	
Collection	
Administration	
Customer	
Total	

2016

Principal	-	-
Issuing Costs	-	-
Total Debt	-	-
Interest Rate	4.0%	
Term	25	
P&I	-	-
P&I Reserve		
Total		

Treatment -- Volume	
Treatment -- BOD	
Treatment -- TSS	
Collection	
Administration	
Customer	
Total	

CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL

Alternative 1

Scenario:

Series: 2017

2017

Principal	-	\$
Issuing Costs	-	
Total Debt	-	
Interest Rate	4.0%	
Term	25	
P&I	-	
P&I		
Reserve		
Total		

Wastewater Allocation Percentages

Category	Percentage
Treatment – Volume	75.0%
Treatment – BOD	12.5%
Treatment – TSS	12.5%
Collection	0.0%
Administration	0.0%
Customer	0.0%
Other	0.0%
Total	100.0%

Series:

2018

Principal	\$ 41,000,000
Issuing Costs	820,000
Total Debt	41,820,000
Interest Rate	4.0%
Term	25
P&L	2,685,192

Wastewater Allocation Percentages

Activity	Percentage
Production recharges	75.0%
Treatment – Volume	12.5%
Treatment – BOD	12.5%
Treatment – TSS	0.0%
Collection	0.0%
Administration	0.0%
Customer	0.0%
Total	100.0%

10 Year Forecast 2008-2017		CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL								
Input Area	2010	1 2011	2 2012	3 2013	4 2014	5 2015	6 2016	7 2017	8 2018	9 2019

Input Area -- Future Debt Service

Scenario: Alternative 1

Series: Total

Wastewater Debt Service

Total	\$	-	\$	-	\$	785,910	\$	785,910	\$	785,910	\$	785,910	\$	785,910	\$	3,471,102
P&L	-	-	-	-	-	157,182	-	157,182	-	157,182	-	157,182	-	157,182	-	537,038
Reserve	-	-	-	-	-	943,092	-	943,092	-	943,092	-	943,092	-	943,092	-	4,008,140
Total	\$	-	\$	-	\$	707,319	\$	707,319	\$	707,319	\$	707,319	\$	707,319	\$	3,006,105
Functionalization	-	-	-	-	-	117,886	-	117,886	-	117,886	-	117,886	-	117,886	-	501,018
Treatment -- Volume	-	-	-	-	-	117,886	-	117,886	-	117,886	-	117,886	-	117,886	-	501,018
Treatment -- BOD	-	-	-	-	-	117,886	-	117,886	-	117,886	-	117,886	-	117,886	-	501,018
Treatment -- TSS	-	-	-	-	-	117,886	-	117,886	-	117,886	-	117,886	-	117,886	-	501,018
Collection	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Administration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Customer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	\$	-	\$	-	\$	943,092	\$	943,092	\$	943,092	\$	943,092	\$	943,092	\$	4,008,140

10 Year Forecast 2010 - 2019

Input
Area

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

Input Area - Debt Service
Scenario: Alternative 1

Existing Debt Service

1 Debt Service - Existing

1A WIFA Loan-Exdise Tax Pledge \$ 37,555,540

Principal	\$ 1,257,391	\$ 1,308,051	\$ 1,360,752	\$ 1,415,577	\$ 1,472,810	\$ 1,531,942	\$ 1,593,664	\$ 1,657,873	\$ 1,724,668	\$ 1,794,155
Interest	1,769,501	1,462,452	1,409,751	1,354,926	1,297,893	1,238,561	1,176,839	1,112,631	1,045,835	976,348
Reserve	554,101	554,101	554,101	554,101	554,101	-	-	-	-	-
Total	\$ 3,580,992	\$ 3,324,604	\$ 3,324,604	\$ 3,324,604	\$ 3,324,604	\$ 2,770,503	\$ 2,770,503	\$ 2,770,503	\$ 2,770,503	\$ 2,770,503

1B Wastewater Allocation Percentages

Treatment - Volume	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Treatment - BOD	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Treatment - TSS	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

2 Debt Service - Existing

2A WIFA Loan-System Revenue Pledge \$ 25,000,000

Principal	\$ -	\$ 900,907	\$ 937,205	\$ 974,965	\$ 1,014,246	\$ 1,055,110	\$ 1,097,621	\$ 1,141,844	\$ 1,187,849	\$ 1,235,707
Interest	1,177,923	1,007,250	970,952	933,182	893,911	853,047	810,537	766,314	720,309	672,450
Reserve	381,631	381,631	381,631	381,631	381,631	-	-	-	-	-
Total	\$ 1,559,554	\$ 2,289,789	\$ 2,289,789	\$ 2,289,789	\$ 2,289,789	\$ 1,908,157	\$ 1,908,157	\$ 1,908,157	\$ 1,908,157	\$ 1,908,157

2B Wastewater Allocation Percentages

Treatment - Volume	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Treatment - BOD	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Treatment - TSS	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

2019

Input Area -- Debt Service

3 Debt Service -- Existing

3A	WWTP Expansion 2003	\$	13,304,502	Principal Balance @ 6/30/2009
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SA	WWTP Expansion 2003	\$	13,304,502	Principal Balance @ 6/30/2009																	
	Principal	\$	569,470	\$	583,248	\$	606,210	\$	629,173	\$	652,135	\$	684,283	\$	707,245	\$	1,129,755	\$	1,455,823	\$	1,529,303
	Interest		602,363		583,856		561,984		539,251		514,084		487,999		460,628		432,338		387,148		314,357
	Reserve																				
	Total	\$	1,171,833	\$	1,167,104	\$	1,168,194	\$	1,168,424	\$	1,166,219	\$	1,172,282	\$	1,167,873	\$	1,562,093	\$	1,842,971	\$	1,843,660

3B	Wastewater Allocation Percentages																				
	Treatment -- Volume	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
	Treatment -- BOD	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
	Treatment -- TSS	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
	Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Administration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

4 Debt Service - Existing

4A Total Bond

[illegible]

Input Area	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019

10 Year Forecast 2010 - 2019

Input Area – Debt Service Scenario: Alternative 1

5 Debt Service – Existing

5A Total Bond	\$	-	-	-	-	-	-	-	-	-
Principal	\$	-	-	-	-	-	-	-	-	-
Interest	\$	-	-	-	-	-	-	-	-	-
Reserve	\$	-	-	-	-	-	-	-	-	-
Total	\$	-	-	-	-	-	-	-	-	-
5B Wastewater Allocation Percentages										
Treatment – Volume	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment – BOD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment – TSS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

6 Debt Service – Existing

6A Total Bond	\$	-	-	-	-	-	-	-	-	-
Principal	\$	-	-	-	-	-	-	-	-	-
Interest	\$	-	-	-	-	-	-	-	-	-
Reserve	\$	-	-	-	-	-	-	-	-	-
Total	\$	-	-	-	-	-	-	-	-	-
6B Wastewater Allocation Percentages										
Treatment – Volume	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment – BOD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treatment – TSS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Collection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Customer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

**10 Year Forecast
2010 - 2019**

**Input
Area**

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

**Input Area – Debt Service
Scenario: Alternative 1**

8 Total Debt Service – Existing

8A Total Debt Service

Principal	\$ 1,826,861	\$ 2,782,206	\$ 2,904,167	\$ 3,019,715	\$ 3,138,982	\$ 3,271,335	\$ 3,398,529	\$ 3,529,471	\$ 4,368,340	\$ 4,559,165
Interest	3,549,787	3,053,558	2,942,688	2,827,370	2,705,888	2,579,607	2,448,004	2,311,282	2,153,252	1,963,155
Reserve	935,732	935,732	935,732	935,732	935,732	-	-	-	-	-
Total	\$ 6,312,380	\$ 6,781,497	\$ 6,782,587	\$ 6,782,817	\$ 6,780,612	\$ 5,850,943	\$ 5,846,534	\$ 6,240,754	\$ 6,521,632	\$ 6,522,321
8B Wastewater Debt Service Functionalization										
Treatment – Volume	\$ 4,734,285	\$ 5,086,123	\$ 5,086,940	\$ 5,087,113	\$ 5,085,459	\$ 4,388,207	\$ 4,384,900	\$ 4,680,565	\$ 4,891,224	\$ 4,891,740
Treatment – BOD	789,047	847,687	847,823	847,852	847,576	731,368	730,817	780,094	815,204	815,290
Treatment – TSS	789,047	847,687	847,823	847,852	847,576	731,368	730,817	780,094	815,204	815,290
Collection	-	-	-	-	-	-	-	-	-	-
Administration	-	-	-	-	-	-	-	-	-	-
Customer	-	-	-	-	-	-	-	-	-	-
Total	\$ 6,312,380	\$ 6,781,497	\$ 6,782,587	\$ 6,782,817	\$ 6,780,612	\$ 5,850,943	\$ 5,846,534	\$ 6,240,754	\$ 6,521,632	\$ 6,522,321

9 Future Debt Service

9A Future Wastewater Debt Service

P & I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reserve	-	-	-	-	-	-	-	-	-	-
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

9B Future Wastewater Debt Service Functionalization

Treatment – Volume	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treatment – BOD	-	-	-	-	-	-	-	-	-	-
Treatment – TSS	-	-	-	-	-	-	-	-	-	-
Collection	-	-	-	-	-	-	-	-	-	-
Administration	-	-	-	-	-	-	-	-	-	-
Customer	-	-	-	-	-	-	-	-	-	-
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

<u>10 Year Forecast</u> 2010 - 2019	CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL									
	Input Area	2010	2011	2012	2013	2014	2015	2016	2017	2018

Input Area – Debt Service
Scenario: Alternative 1

10 Total Existing and Future Debt Service

10A Total Wastewater Debt Service

P&I	\$	5,376,648	\$	5,845,765	\$	5,845,855	\$	6,632,994	\$	6,630,789	\$	6,636,852	\$	6,632,443	\$	7,026,663	\$	7,307,541	\$	9,993,423
Reserve		935,732		935,732		935,732		1,092,914		1,092,914		157,182		157,182		157,182		-		537,038
Total	\$	6,312,380	\$	6,781,497	\$	6,782,587	\$	7,725,909	\$	7,723,704	\$	6,794,034	\$	6,789,625	\$	7,183,845	\$	7,307,541	\$	10,530,461

10B Wastewater Debt Service Functionalization

Treatment – Volume	\$	4,734,285	\$	5,096,123	\$	5,086,940	\$	5,794,431	\$	5,792,778	\$	5,085,526	\$	5,092,219	\$	5,387,884	\$	5,480,656	\$	7,897,846
Treatment – BOD		789,047		847,687		847,623		965,739		965,463		849,254		848,703		897,981		913,443		1,316,308
Treatment – TSS		789,047		847,687		847,623		965,739		965,463		849,254		848,703		897,981		913,443		1,316,308
Collection		-		-		-		-		-		-		-		-		-		-
Administration		-		-		-		-		-		-		-		-		-		-
Customer		-		-		-		-		-		-		-		-		-		-
Total	\$	6,312,380	\$	6,781,497	\$	6,782,587	\$	7,725,909	\$	7,723,704	\$	6,794,034	\$	6,789,625	\$	7,183,845	\$	7,307,541	\$	10,530,461

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

Current

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

Input Area -- Rate Calculator
Scenario: Alternative 1

Wastewater Rates

Month of Adjustment (July = 1)

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

Annual Adjustment

Resid - In

Collection

Treatment

Resid - Out

Collection

Treatment

Commercial

Industrial

Other

Other

Resid - In

Base Charge - Collection

Usage Charge - Treatment

Resid - Out

Base Charge - Collection

Usage Charge - Treatment

Commercial

Base Charge

Usage Charge (per

Industrial

Base Charge

Usage Charge (per

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

Base Charge

Usage Charge

Other

CITY OF CASA GRANDE WASTEWATER COST OF SERVICE MODEL										
Current	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019

Input Area -- Rate Calculator
Scenario: Alternative 1

Summary of Results -- Rate Calculator

Revenues Less Revenue Requirement										
Total	2,776,716	899,864	1,299,299	808,472	1,393,297	921,697	1,456,152	1,463,740	1,853,417	439,112

Debt Coverage	1.75	1.37	1.44	1.34	1.44	1.23	1.31	1.30	1.32	1.15
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WW Rate Revenues

WW Rate Revenue										
Resid.-In										
Collection/Customer										
Treatment										
Total	\$ 1,245,453	\$ 1,297,104	\$ 1,365,449	\$ 1,456,938	\$ 1,552,887	\$ 1,652,869	\$ 1,763,186	\$ 1,872,946	\$ 1,967,709	\$ 2,107,670
Resid.-Out										
Collection/Customer										
Treatment										
Total	\$ 1,084,214	\$ 1,206,612	\$ 1,346,083	\$ 1,508,855	\$ 1,701,079	\$ 2,170,870	\$ 2,376,917	\$ 2,567,233	\$ 2,770,639	\$ 3,380,808
Commercial										
Industrial										
Other										
Other										
Sub-Total	\$ 4,954,401	\$ 5,420,769	\$ 6,038,818	\$ 6,729,839	\$ 7,584,436	\$ 9,011,873	\$ 9,871,212	\$ 10,606,969	\$ 11,501,026	\$ 13,699,837
Loss Revenues to be Raised from Rates:										
Resid.-In										
Collection/Customer										
Treatment										
Total	\$ 416,379	\$ 446,150	\$ 474,375	\$ 511,966	\$ 549,572	\$ 593,021	\$ 638,267	\$ 687,992	\$ 739,079	\$ 793,657
Resid.-Out										
Collection/Customer										
Treatment										
Total	\$ 916,194	\$ 2,302,238	\$ 2,390,568	\$ 3,092,268	\$ 3,209,097	\$ 4,330,047	\$ 4,465,594	\$ 4,878,886	\$ 5,107,927	\$ 7,259,999
Commercial										
Industrial										
Other										
Other										
Sub-Total	\$ 1,332,573	\$ 2,748,388	\$ 2,864,943	\$ 3,604,235	\$ 3,758,669	\$ 4,923,068	\$ 5,103,861	\$ 5,566,878	\$ 5,847,006	\$ 8,053,656
Resid.-Out										
Collection/Customer										
Treatment										
Total	\$ 4,174	\$ 4,554	\$ 4,874	\$ 5,362	\$ 5,857	\$ 6,423	\$ 7,075	\$ 7,896	\$ 8,842	\$ 9,859
Commercial										
Industrial										
Other										
Other										
Sub-Total	\$ 9,184	\$ 23,499	\$ 24,562	\$ 32,385	\$ 34,203	\$ 46,901	\$ 49,500	\$ 55,984	\$ 61,110	\$ 90,189
Commercial										
Industrial										
Other										
Other										
Sub-Total	\$ 13,357	\$ 28,053	\$ 29,436	\$ 37,747	\$ 40,061	\$ 53,324	\$ 56,575	\$ 63,880	\$ 69,952	\$ 100,048
Commercial										
Industrial										
Other										
Other										
Sub-Total	\$ 601,167	\$ 1,264,002	\$ 1,306,537	\$ 1,822,646	\$ 1,674,928	\$ 2,195,490	\$ 2,260,690	\$ 2,459,942	\$ 2,575,952	\$ 3,554,595
Commercial										
Industrial										
Other										
Other										
Sub-Total	\$ 230,586	\$ 480,451	\$ 536,602	\$ 658,738	\$ 721,480	\$ 916,304	\$ 994,935	\$ 1,052,519	\$ 1,154,689	\$ 1,552,235
Commercial										
Industrial										
Other										
Other										
Sub-Total	\$ 2,177,689	\$ 4,520,895	\$ 4,739,518	\$ 5,921,366	\$ 6,195,138	\$ 8,090,177	\$ 8,416,061	\$ 9,143,229	\$ 9,647,609	\$ 13,260,525

CITY OF CASA GRANDE											
WASTEWATER COST OF SERVICE MODEL											
Current	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	

Input Area -- Rate Calculator
Scenario: Alternative 1

Rate Revenue Less RRRR:

Resid - In											
Collection/Customer											
Treatment	\$ 829,075	\$ 850,954	\$ 891,074	\$ 944,971	\$ 1,003,115	\$ 1,059,848	\$ 1,124,919	\$ 1,194,956	\$ 1,248,030	\$ 1,314,013	
Total	1,144,518	(10,210)	186,206	(155,990)	132,818	(371,216)	(130,501)	(184,509)	(29,174)	(1,048,398)	
	1,973,592	840,745	1,077,280	788,981	1,135,933	688,632	994,418	1,000,448	1,219,456	265,614	
Resid - Out											
Collection/Customer											
Treatment	14,553	15,308	16,170	17,526	18,968	20,431	22,242	24,347	26,828	29,415	
Total	21,800	11,593	15,151	13,742	19,225	17,419	22,590	24,821	30,031	25,559	
	36,353	26,899	31,321	31,268	38,191	37,850	44,821	49,168	56,860	54,974	
Commercial											
Industrial	485,047	(57,351)	39,527	(113,791)	28,150	(24,610)	116,226	107,291	194,588	(173,777)	
Other	283,726	89,611	151,172	102,014	188,023	219,824	299,686	306,833	382,414	292,301	
Other	-	-	-	-	-	-	-	-	-	-	
Other	-	-	-	-	-	-	-	-	-	-	
Rate Revenue less Revenue Rmt.	2,776,718	899,864	1,299,259	806,472	1,399,297	921,637	1,455,152	1,463,740	1,853,417	439,112	
Debt Coverage	1.75	1.37	1.44	1.34	1.44	1.23	1.31	1.30	1.32	1.15	

WASTEWATER -- Customer's Usage Data

Customer Class Units -- Base Annual Usage											
Resid - In											
Resid - Out	1,292,928,000	1,307,328,000	1,336,128,000	1,384,128,000	1,432,128,000	1,480,128,000	1,532,928,000	1,580,928,000	1,628,928,000	1,676,928,000	
Commercial	12,960,000	13,344,000	13,728,000	14,496,000	15,264,000	16,032,000	16,892,000	17,144,000	19,488,000	20,832,000	
Industrial	608,355,482	615,484,648	624,198,072	636,080,015	651,922,808	671,725,844	691,529,063	711,332,321	731,135,560	750,938,798	
Other	234,687,924	234,687,924	238,156,716	238,156,716	281,625,509	281,625,509	305,094,301	305,094,301	328,563,094	328,563,094	
Other	-	-	-	-	-	-	-	-	-	-	
Other	-	-	-	-	-	-	-	-	-	-	
Total Wastewater	2,148,931,406	2,170,844,572	2,232,210,789	2,292,860,732	2,380,940,115	2,449,511,353	2,546,543,384	2,615,498,622	2,708,114,653	2,777,291,891	

**CITY OF CASA GRANDE
WASTEWATER COST OF SERVICE MODEL**

Input Area -- Rate Calculator
Scenario: Alternative 1

Base Annual Usage

	Current	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Resid - In											
20,001											
Total											
100%	1,292,928,000	1,307,328,000	1,306,128,000	1,384,128,000	1,384,128,000	1,432,128,000	1,480,128,000	1,532,928,000	1,580,928,000	1,628,928,000	1,676,928,000
0%	1,292,928,000	1,307,328,000	1,336,128,000	1,384,128,000	1,384,128,000	1,432,128,000	1,480,128,000	1,532,928,000	1,580,928,000	1,628,928,000	1,676,928,000
Resid - Out											
20,001											
Total											
100%	12,980,000	13,344,000	13,728,000	14,496,000	14,496,000	15,264,000	16,032,000	16,992,000	18,144,000	19,488,000	20,832,000
0%	12,980,000	13,344,000	13,728,000	14,496,000	14,496,000	15,264,000	16,032,000	16,992,000	18,144,000	19,488,000	20,832,000
Commercial											
20,001											
Total											
75%	456,266,611	481,613,486	488,148,554	477,060,012	477,060,012	488,941,955	503,794,383	518,046,812	533,499,241	548,351,670	563,204,098
25%	152,098,870	153,871,162	156,049,518	159,020,004	159,020,004	162,980,552	167,931,481	172,882,271	177,833,080	182,783,890	187,734,699
0%	608,355,482	615,484,648	624,198,072	636,080,015	636,080,015	651,922,606	671,725,864	691,529,083	711,332,321	731,135,560	750,938,798
Industrial											
20,001											
Total											
100%	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924
0%	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924	234,687,924
Other											
20,001											
Total											
100%	-	-	-	-	-	-	-	-	-	-	-
0%	-	-	-	-	-	-	-	-	-	-	-
Other											
20,001											
Total											
100%	-	-	-	-	-	-	-	-	-	-	-
0%	-	-	-	-	-	-	-	-	-	-	-
Total Wastewater											
20,001											
Total											
100%	2,148,931,406	2,170,844,572	2,232,210,769	2,292,860,732	2,292,860,732	2,380,940,115	2,449,511,353	2,548,543,384	2,615,498,622	2,708,114,653	2,777,261,891
0%	2,148,931,406	2,170,844,572	2,232,210,769	2,292,860,732	2,292,860,732	2,380,940,115	2,449,511,353	2,548,543,384	2,615,498,622	2,708,114,653	2,777,261,891
Customer Class Units -- Total Bills											
Resid - In											
Resid - Out											
Commercial											
Industrial											
Other											
Other											
Other											
Total Wastewater											
20,001											
Total											
100%	161,616	163,416	167,016	173,016	173,016	179,016	185,016	191,516	197,516	203,516	209,516
0%	1,620	1,668	1,716	1,812	1,812	1,908	2,004	2,124	2,268	2,436	2,594
Commercial											
Industrial											
Other											
Other											
Other											
Total Wastewater											
20,001											
Total											
100%	172,572	174,528	178,320	184,596	184,596	190,944	197,340	204,372	210,816	217,296	223,764
0%	172,572	174,528	178,320	184,596	184,596	190,944	197,340	204,372	210,816	217,296	223,764